

June

Uxbridge, Middlesex.

Kingston-on-Thames, Surrey.

Huyton with Roby, Lancs.

Bwell, Surrey.



SUBURBAN CENTRES.

In this issue the Review announces the formation of a Counter-Attack bureau which is now in operation. For further details see page 405

Bristol University - Chipping Sodbury.

Bristol University - Shepton Mallet.

Linear Hammersmith.

Westgate Fields, Chichester.

Brampton, Cumberland.

TOWNSCAPE

Feckenham, Worcs. Sub-station.

Esher, Surrey, Pylons.

C.E.A

Nuclear Power Stations.

Halifax Street, Sydenham.

Cavendish, Suffolk.

S.O.S OUTRAGE

New Town Social Survey.

Underground and overhead wire.

Walling and Fencing Costs.

Indoor T.V. Aerials.

RESEARCH PROJECTS

Kingston, Surrey, 21st. June.

Urchfont, Wilts., 31st. May.

Weybridge, Surrey, 23rd. May

LECTURES

Mill Hill, Middlesex, 10th. May.

C O U N T E R
- A T T A C K





MAGNET

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OUTSIDE

WHERE

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MUST DO MORE THAN DECORATE

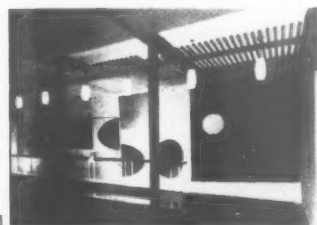
Magnet could be chosen for its looks alone ; for its lustrous gloss
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MARGINALIA

Giant Photomurals

Quite apart from their great size, the two wall-long photomurals on the Reed Paper Group stand at the recent packaging exhibition (stand designer: Arthur Braven) were remarkable in bringing together the talents of two artists who, though very different in aims, were able to make particularly sympathetic use of the medium. Victor Pasmore has been experimenting for some time with photographic surfaces and photocollage, and his mural in the lounge, 1, gave him an opportunity to apply these techniques on the architectural scale he prefers to use when a chance presents itself. The



other, which was intended to counterpoint a display of food and drink packs, 2, was the last major public exercise of the graphic talents of the late John Minton, and suggested that direct photo-reproduction might have been an almost perfect medium for his style of draughtsmanship, had he lived to exploit it fully.

National Water Park

A Society for the Protection of the Solent Area has just been formed to protect what remains of Britain's best sailing inlet on the South Coast: an ideal site for a National Water Park. The Solent has had a raw deal from technology—principally from Fawley refinery. In the words of the brochure, 'This area is almost a test case for amenity societies—if they can succeed here, they can succeed anywhere.' This new society deserves all the support it can get. The area is defined as 'all waters inside the Wight and those extending eastward to Selsey Bill together with the land adjoining these waters.' The annual subscription is twenty shillings and application forms can be obtained

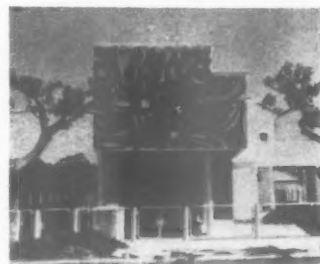
from Brig. M. W. Hope, D.S.O., The Society for the Protection of the Solent Area, c/o 680, Commercial Road, London, E.14.

Chichester Churches

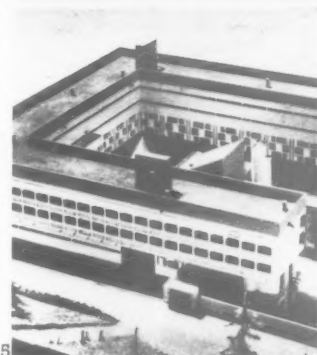
The Little Churches of Chichester, by Lindsey Fleming, is a simple conscientious record of four of Chichester's old parish churches, but it is faced with one insuperable obstacle—the architectural poverty of the buildings. All four are small, dim and restored, and their charm is entirely in their place in the town, which isn't mentioned: St. Peter and St. Olave, hobbling up in North Street, All Saints acting as a foil for the entry from South Street to the severely Palladian houses in the Pallant, St. Andrew Oxmarket hidden behind East Street, and only to be reached by a pair of alleys. All four churches have just become redundant in a system of amalgamation of parishes—though only one, St. Peter, seems likely to be demolished: St. Olave, the prettiest, is already agreeably converted into a SPCK bookshop. There are actually just four more little churches in central Chichester which remain unimpaired and they would well make another booklet, though they are well and truly post-Reformation. They are St. Bartholomew, a pretty mid c 18 barn, St. Pancras, dour 1750 Gothic, R. C. Carpenter's impeccable church of St. Peter opposite the Cathedral, and the mad irregular octagon of St. John, 1812, by James Elmes, father of Harvey Lonsdale, with the unique arrangement inside of a central three-decker pulpit, quite over-shadowing the altar, and an east gallery.

Algerian Wallscape

The use of painted patterns to control an awkward shape, to lose unwanted features, to enliven a blank surface, need not be restricted to diapers and other regular repeats. A wall of limited extent, particularly if it strikes the eye somewhat insulated



from its surroundings, may be treated as a (more or less) centralized composition, as in this villa in Algiers by François Caviglioli, 3, where a large Leger-esque floral composition is used to unify a wall that—though a true expression of the corridor-access rooms behind it—might not appear satisfactorily in all viewpoints, and to lead the eye away



from a window that would otherwise focus attention at an uncomfortable point on the wall surface.

Corb's Friary

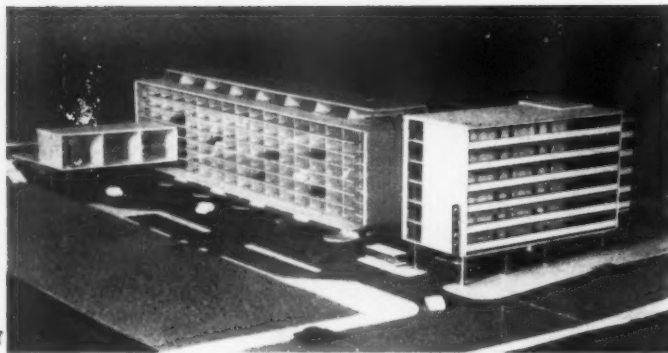
Rumours that Le Corbusier was even further involved with religious architecture have now been confirmed by the appearance of picture post-card views of a model of a Dominican Friary now under construction to his design at Eveux, near Lyons. The post-cards reveal a claustral layout on a sloping site that drops the equivalent of three storey-heights from one side to the other, and produces, on the taller elevations, 4, an appearance not unlike a cross between the *Unité* at Nantes and the monasteries of Mount Athos. There appears to be a centrally situated chapel within the cloister, and there also appears to be some doubt about its ultimate form when photographs

are compared, 5. The completed design will be awaited with considerable interest, since it suggests, among other things, that the somewhat divergent elements of Le Corbusier's post-war style may at last have reached some kind of unity and synthesis.

Welded, Timeless Boiler-House

Although Modern Movement theorists at one time supposed that engineers created works whose virtues, like those of the Parthenon, were timeless, most engineering works can be dated with some accuracy by an observer with a trained eye. One building that might well tax historical expertise to the limit, however, is the boiler house for the Technical Education Centre at Cachan, France, 6, which looks at first sight like a product of Expressionist Machine-Romanticism of about 1924, but is actually a work of the last two years. The dramatic form arises largely from the use of a system of construction from corrugated rolled steel sections, welded together into giant corrugations of up to twenty feet from crest to crest, the whole forming a self-supporting asymmetrical shell spanning over sixty feet, without employing any steel more than .06 of an inch thick. By an historical irony, this feat of timeless engineering virtuosity has been carried out under the general direction of Pol Abraham, whose criticisms of the theories of Viollet-le-Duc (and of Rationalism in general) have done much to corrode those certainties about the timeless virtues of engineering that were current in the Twenties.



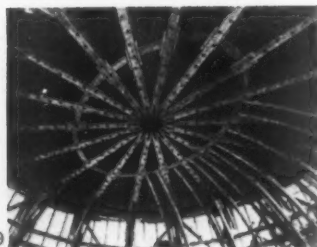
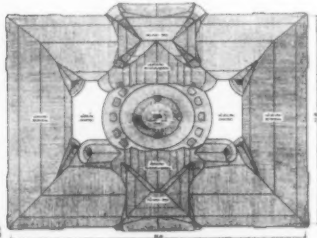


London Autosilo

The first proposals for a multi-storey parking garage on the Autosilo principle in the City of London have recently received LCC approval. The garage is part of a group of buildings, 7, which will also include a restaurant, offices and some residential accommodation, designed by C. Edmund Wilford & Son, for a site by Southwark Bridge which will give the restaurant a riverward prospect. The Autosilo principle stacks the cars in a form of egg-crate filling-box, and handles them by means of a variant of the fork-lift method, so that no internal ramps or drive-ways are required and the cars can be left locked. This method has the advantage over other mechanical-handling systems of having been tried out for some time on the Continent, as well as being, architecturally, simpler in plan and easier to fit into the sort of sites likely to become available than circular stacking-towers, whatever their theoretical advantages.

The Roofs of Bruchsal

A late casualty in the war, the Episcopal Palace at Bruchsal in Baden was effectively de-roofed and internally damaged on March 1, 1945. The labours of re-covering this masterpiece of Balthasar Neumann's rococo genius are only now approaching completion, and have an interest far beyond the mere fact of restoration. An accurate survey of the roof layout whose falls take on very complex geometrical forms in places—has revealed a pattern of shapes fully as rococo as anything inside the building, and which must have required a masterly knowledge of projective geometry to design, since the intersections are much too complex for rule-of-thumb solutions, 8.



But the work of re-roofing is technically interesting in its own right, particularly the framing of the oval dome over the staircase. The main structure was offered up in the form of half portal-frames, grounded on a new reinforced concrete tension-ring at the level of the cornice of the stair-hall, and brought together on a steel compression ring at their heads. The fabrication is mostly by means of large bolts and iron strappings and produces so elegant a pattern, 9, that some regret must be felt that it will be concealed from view by plaster-work that, at its best, will only be a copy of the original.

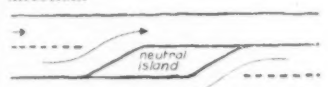
CORRESPONDENCE

Switch ON

To the Editors,

SIRS, I should like most warmly to support your proposals for making more efficient use of our existing roads (ARCHITECTURAL REVIEW, March, 1957). But I am sorry that you propose to limit your scheme to curves and hill crests, partly because such a limitation is quite unnecessary, and partly because it is in its application to such 'dangerous' sections of the road that official opposition to your scheme is likely to be at its strongest.

A far better plan would be to follow the example of Belgium and other continental countries who have long realized the serious inefficiency and danger inseparable from the ordinary three traffic lane type of road. Instead of waiting pathetically for 'Autobahnen', they have set to work with a sense of urgency and imagination to rationalize their existing roads. Their main remedy has been the simple one of a shifting continuous white line on all three-lane main roads, the white line being arranged so that the middle lane is clearly reserved for traffic in one direction and then, at a suitable point, the white line swings over so as to place the middle lane at the service of traffic from the opposite direction.



With the certainty of having the use of a 'reserved' middle lane section for roughly every alternate mile, every motorist knows that he has regular opportunities to overtake in safety; and with a general system of this kind, its application to all sections, including curves and hill crests, becomes perfectly natural.

I first met this system in Belgium some two or three years ago, and found it unbelievably successful. I had had no advance warning or explanation of any kind, but the carefully designed system of white lines explained itself. It was in the height of summer and the roads

were carrying a heavy load of commercial and holiday traffic, which sorted itself out with a smoothness and speed quite impossible on similar width roads in this country.

Here is a really big improvement which we could make quickly, and at almost no cost, to long stretches of our existing roads. In the name both of safety and efficiency let us learn this simple lesson from the continent, and put an end to the present stupidity of leaving it to traffic coming from both directions at once to 'fight it out' in a middle 'suicide lane.'

Yours, etc.,

STANLEY PARRIS.

Pen-y-cae Mawr, Mon.

European Reconstruction

To the Editors,

SIRS,—On page 171 of your March issue, where you describe a 'dismal picture in the much bombed City of Hull,' of the four illustrations given to 'post-war building in Hull'—the first illustration was built in 1930 by a London firm of architects, the second is a pre-war block of flats, the third is a factory on the outskirts of Hull and is not a result of war damage and the last was by a firm of architects from the south coast. We think these examples are far from a fair and true sample of rebuilding in Hull since the war.

Yours, etc.,

GELDER & KITCHEN.

Hull.

Gallons into Pint Pots

To the Editors,

SIRS, I know that mensuration is a dull subject compared with aesthetics, but since not even your gifted contributors have yet found a way of transcending the laws of space, so far as I know, it has its importance.

On page 415 of your 'Counter Attack' issue Walter Manthorpe sets out diagrammatically land use allocations for New Towns, A at New Towns Committee standards, B at his own standards, in both cases for a population of 50,000. He comments: 'Maximum distance of housing in Town A from true countryside—approx. 630 yards. Maximum distance of housing in Town B from true countryside—approx. 280 yards.'

If these statements were correct the overall town density of B would be almost 700 persons per acre, which is on the high side even for the ARCHITECTURAL REVIEW.

The true distances are approximately 2,200 yards, and 1,100 yards for A and B respectively which alters the whole picture rather drastically.

There are many other comments I could make about Mr. Manthorpe's contribution, which, despite much that is interesting and valuable, contains many highly questionable statements, but for the moment I will content myself with pointing out that, even when the arithmetic is corrected, the comparison of centre to edge distances in A and B is still not accurate. B contains only 50 acres of open space, and the peripheral land needed to accommodate the rest will certainly not be 'true countryside,' which is usually agricultural land upon which farmers, oddly enough, do not like the public to disport themselves unrestrictedly.

I do hope you will give some prominence to the correction contained in this letter. Otherwise the frustration among enthusiastic young architect-planners striving to get gallons into pint pots is liable to rise to fearful heights.

Yours, etc.,

L. B. KEEBLE.

London, N.W.11.

[Ian Nairn replies: Mea culpa; I was responsible for that particular calculation, and both distances should in fact be multiplied by $\sqrt{10}$ to give approximately 930 and 2,100 yards—figures which add point to the comparison rather than detract from it. Part of the argument was that if the open space is gathered up into a big park instead of being feathered away, the total area of open space (given a compact town) can be less. If there have to be peripheral open spaces and playing fields, they are visually part of the countryside beyond, and can form a natural buffer; whereas the same playing fields surrounded by housing look institutional and make the town sprawl farther.]

INTELLIGENCE

The University of Khartoum has appointed its first Professor of Architecture, Mr. J. A. Potter, who has been head of the Hull School of Architecture since 1948.

Premio Olivetti

The second national prize of architecture and town-planning offered by Olivetti has gone to Ludovico Quaroni and Carlo Scarpa. Quaroni is known as the town-planner for Ivrea and for the estate called Matera which will shortly be discussed in the ARCHITECTURAL REVIEW. Carlo Scarpa* is a specialist in exhibition displays. He did the arrangement of the Museum at Palermo and the Museo Correr and also the memorable Chinese exhibition at the Palazzo Ducale in 1954, the Klee exhibition at the Biennale in 1948 and the recent exhibition of the work of Mondrian. The first national prize went to Piccinato and Gardella.

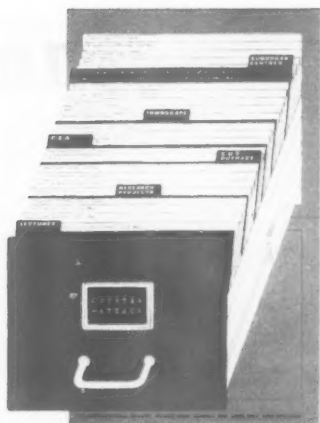
*See the works of Carlo Scarpa in *L'Architettura*, no. 3, p. 340.

ACKNOWLEDGMENTS

MARGINALIA, pages 401-402: 1 and 2, Colliers, Dover Street, Ltd.; 3, Cavoglioli; 4, 5, Recamier, Lyon. PROSPECTIVE, page 404: Atelje Sundahl, EWELL and HUTTON, pages 408-413: all photos Cullen and Nairn, Arphot. HOUSING IN GOLDEN LANE, pages 414-425: 4, Alfred Cracknell; remainder Galwey, Arphot. BOMBARZO, 2, pages 426-430: 12, Priscilla Hastings, 14-21, S. Lang, OLIVETTI, pages 431-439: 2, 3, 4, 6, 8, 9, 10, 11, 12, 39, 40, 44, 45, Olivetti photographs; 15, *L'Architettura*; 41, Hans Namuth; 42, Ray J. Pople; remainder Olivetti house publications, MUSEUM AT ACCRA, pages 440-444: Geoffrey Knight and Tom Bell of Fry, Drew, Drake and Lasdon, BALMES HOUSE, pages 445-446: 1, 2, 5, by courtesy of Hackney Borough Library. CURRENT ARCHITECTURE, pages 447-450: Offices at Bristol, Toomey, Arphot; House at Hertingfordbury, J. Samworth; Flats at Liverpool, Carbonara Studios; School at Bletchley, John Maltby. MISCELLANY, pages 451-456: Counter Attack; Halifax Street, Betty Swanwick and Galwey, Arphot; rest Nairn, Arphot; History, 1, Toomey, Arphot; 2, courtesy of Public Record Office; Exhibitions, 2, Royal Academy; 3, Alfred Castlebach. SKILL: Interiors, John Maltby. DESIGN REVIEW: 1, Morland Braithwaite; 2, Court Advert Co. Ltd.; 3, 4, Marshall Studios; 5-10, COID; 11, National Publicity Co.; 12, Julian Studios. TECHNIQUES, Timber Development Association.

THE ARCHITECTURAL REVIEW

Volume 124 Number 725 June 1957



This Month's Cover, a drawing by Gordon Cullen of a filing cabinet full of outrages and their antidotes, celebrates the fact that the Counter-Attack Bureau is now an organization in being, a centre from which outrage may be combated and forestalled in an orderly and systematic manner, on a nationwide scale, and with co-ordinated effort. The Bureau's aims and methods, interests and services are discussed in an essay on pp. 405-407.

401 Marginalia

402 Correspondence

404 Frontispiece

405 Counter-Attack With the foundation of THE ARCHITECTURAL REVIEW's Counter-Attack Bureau there is now articulate representation for an attitude to planning development that has not so far had a voice—The Improver's. The other attitudes, that of pure Utilitarianism, that of Preservation, and that of Tidy-Minded prettifying of the edges of the mess, have not lacked their official and unofficial apologists, but the Improver approach has rarely been heard outside the pages of the REVIEW. Now this approach is available as an advisory service, aiming to match old and new, the existing and the intruding, in an imaginative manner that would help both worlds make the best of one another. This essay outlines the principles on which the Bureau will work and the kind of advice and publicity it will be able to afford to Outrage's victims, and intended victims; a watch and ward service for the good character of visual England.

408 Ewell and Huyton by Gordon Cullen As an example of a comprehensible visual and human entity on the brink of subtopian disintegration, Mr. Cullen has selected the village of Ewell, ringed by developer's squalor, and distended by traffic that ought to be funnelled along its existing By-pass road. The existence of the by-pass is a possible instrument of salvation, if the local bus services can be directed into it out of the High Street; the largely accidental existence

of a miniature green belt three-quarters of the way round the village is another, if it can be made visually effective. By such simple means as these the identity of the place can be maintained and the rights of its human occupants asserted. As a pendant to the case of Ewell is the situation at Huyton near Liverpool, where pure Municipal megalomania threatens a natural centre with an ill-considered shopping arcade of doubtful utility.

414 Flats at Golden Lane: Architects, Chamberlin, Powell and Bon

427 Bomarzo 2 by S. Lang The fantastic ruinage of the already fantasticated gardens and sculptures at Bomarzo was discussed in the REVIEW in 1954—a uniquely ruinous and romantic landscape in which nature had outplayed the imagination of man. Now, with the conservation of the gardens about to be put in hand, it seems almost certain that nature must, to some extent, be expelled, and attention will be shifted more to what is revealed about the imagination of man. In this article Dr. Lang attempts to relate the seemingly improbable subject matters of the sculptures, carved from the living rock, to the iconographic and emblematic themes current in the century in which the garden was laid out, revealing it as a sacred grove, dedicated in Christian piety to the memory of a loved one to whom the scheme's begetter, Vicino Orsini, hoped to be united in another world. At the same time she uncovers its connections with another garden, laid out for Cardinal Madruzzi at Soriano nel Cimino, and shows in both an early dedication to the concept of the *Genius Loci*.

431 Olivetti by Georgina Masson The name of Olivetti is a legend in the history of contemporary design, and his policy of visual excellence, embracing every aspect of his plant, products and publicity is an example to enlightened industrialists the world over. But this visual policy does not exist in abstract isolation—it is, as Miss Masson points out, part of a general desire for industrial and social amelioration that runs through all Adriano Olivetti's activities, and has turned the personal paternalism that prevailed in his father's time, when the plant was small, into the broad social policy of today, that expresses itself in improved workers' housing and social facilities, an active interest in regional planning, the *Comunità* political programme, and the opening of new plant in the capital-starved southern half of the Italian peninsula. In this Olivetti is unique in the world, as well as Italy, a product of his time and place who transcends both, and Miss Masson's article is a survey of his aims, methods and achievements, and the faith that supports them.

440 Museum at Accra: Architects, Drake and Lasdun, of Fry, Drew, Drake and Lasdun

445 Balmes House by Priscilla Metcalf Better known for most of the two centuries it stood in Hackney as 'Sir George Whitmore's House,' Balmes House was something of an art-historical enigma. The evidence suggests that it was built before the Civil War, the surviving pictorial records suggest that its detailing and much of its conception was artisan, rather than scholarly, yet its appearance can hardly allow it to be classed as Artisan Mannerist. Many of the check-features of Artisan Mannerism are absent, and the intention seems to have been to create a genuinely classical building. Such an intention would have been less surprising after the Restoration, or after the completion of a number of other houses such as Coleshill that Miss Metcalf discusses in an attempt to relate Balmes House, destroyed just over a century ago, to the architectural trends of its times.

447 Current Architecture Miscellany

451 Counter-Attack

453 History

454 Exhibitions

455 Books

Skill

457 Interiors: Tea Bar in Lower Regent Street, S.W.1 Designers, Misha Black and Kenneth Bayes, of Design Research Unit

458 Mobile Demonstration Unit Designers, Misha Black and William Apps, of Design Research Unit

459 Showroom in Old Street, E.C.1 Designer, F. M. Gross

461 Design Review: Food Preparation Equipment

463 Techniques: Timber Engineering by Lance Wright

464 The Industry

466 Contractors, etc.

The Authors: Priscilla Metcalf is a B.A. of Wellesley College 1936; did war service USA 1942-45; became M.A. Radcliffe College 1947, and was assistant editor Harvard University Press 1947-52; she won a Fulbright fellowship, 1952-54, to study British architecture in London; is now an assistant editor at Leonard Hill Books Ltd., London, and lives in Paultons Square; hoping to be naturalized when required period of residence allows. Was born a New Englander—the first Metcalf was sailing there the same summer Whitmore was probably rebuilding Balmes House.

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FIVE SHILLINGS



Whether or not it is Brutalist, the use of beton brut, naked and unadorned, for the walling of Carl Nyrén's recently-completed non-denominational church at Vällingby, Sweden, opposite, is symptomatic of a world-wide feeling that the problem of church design now calls for more radical solutions than any other branch of architecture. Nyrén couples the concrete's blunt, almost Early-Christian simplicity, with a chancel-form and lighting that give the feeling of a cave or catacomb, and the result lies far from the glazed boxes of reason and maximum illumination that were until recently the norm of a modern church.

The Editors

COUNTER-ATTACK

THE NEXT STAGE IN THE FIGHT AGAINST SUBTOPIA

Outrage is no new game ; it is just a new phase of an old battle with direct lineage back to the Industrial Revolution and, undocumented, back beyond that for as long as radical changes have ever been proposed to existing landscapes. In its present form it was first clearly described and most valiantly attacked by Clough Williams-Ellis in *England and the Octopus*, written in 1928. That was largely a picture of private vandalism, the sort of thing which planning—in the postwar wave of Brave New Britain optimism—might reasonably have been expected to cure. It didn't because, as was shown in *Counter-Attack*, it was castrated by having no powers over the new oligarchy of government departments, and because the Ministry of Planning was given up after a year or two along with the ground-nuts and the Gambian eggs. There is no telling what might have happened if it had continued with the same *élan* in administration and research as did the Ministry of Education. But it didn't, and we now have the wry situation where the visual ills shown in *England and the Octopus* can be paralleled exactly, but are now carried out by public bodies (either by local government departments being their own planning authorities, or by central government departments being outside planning altogether). John Betjeman's admirable weekly protest meeting in *The Spectator* logs the spread of the disease.

In all this, the basic pattern of material progress *V.* preservation is unaltered, and only takes on new forms—and in the twentieth century it has taken on many more new forms much quicker, hence our present problems. Towards any change in the landscape at any time, there have always been the two perennial attitudes, viz. : 1, *The Utilitarian* : progress at any price. If it looks nasty that's just too bad; the import-

ant thing is to get the kilowatts or the lumens or the housing units ready in time for the annual returns. This attitude is often called by its owners 'plain common sense'* and the reaction is simply and understandably to go to the opposite pole like a repelled magnet:

2, *The Preservationist*: not a tile or timber to be touched; don't disturb our ancient peace (coupled in greater or less degree with the conviction that motor cars, mass housing, street lighting etc. are inherently evil).

And there the deadlock rests. While British local government persists in behaving like a ludicrous cut-rate edition of national politics, the two attitudes invariably attach to different acts in the political circus, resulting in amenity becoming a minor political counter. Most of the time the Utilitarian wins; a bit of the time the Preservationist wins and secures one 'beauty spot', often cut off visually from the environment around it, a pattern already clear in some outer-London boroughs with their handful of ancient monuments floating like flotsam in a sea of mess.

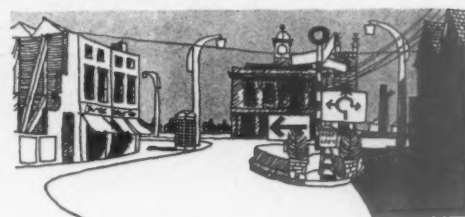
Is there no other solution?—there is obviously the Famous English Compromise, or half-way house, a kind of statistical average of 1 and 2. This is:

3, *The Tidy-Minded*, which means that all that was going on before continues to go on but with rather better detailing and rather less mess. That is where *Counter-Attack* could lead if it succeeded in the shallow sense and failed in the deeper one: straight to a hygienic and sterile national Sunday School.

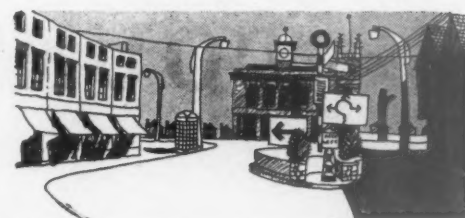
And finally, there is the creative harmonization of old and new, the half-way house plus imagination, the position of:

4, *The Improver*, which is the REVIEW's position; the attitude that changes can be fitted into the existing pattern to enhance it, not explode it, and that where an existing pattern has to go under, the new pattern can be constructed to be something finer than the old. The keynote, if one word could be found to express it, is integration or 'togetherness'. Nash was clearly an Improver when he built the New Town which we know today as the Regents Park estate: so were some of the early industrialists, at Coalbrookdale or near Halesowen. So, unconsciously, have been the host of local masons† who have made English country towns—Devizes, Ludlow, Louth, Lancaster—among the great anonymous masterpieces of the world.

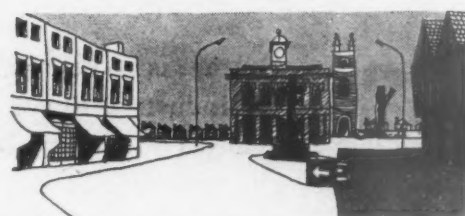
This same lesson of togetherness runs through the aesthetics of individual works of art, where 'togetherness of the components' in its widest sense is the essence of artistic



the typical twentieth-century town centre.



next, the same thing with a bit of Preservation at work.



third, Preservation and Tidy-Mindedness—still nowhere near creating a whole environment.



and finally, Improvement—well designed things related to one another.

*But, significantly, not 'sound business'. The big American corporations have realized that imaginative design means prestige. The U.K. will realize this, in the usual way, twenty years late.

†Including the one who put a single rumbustious red brick c 18 front in the middle of Burford's cool stone High Street, a kind of *pons asinorum* between Tidy-Mindedness and Improvement.

quality; and through life itself, where psychological terms like 'integrated' and 'balanced' simply mean that living has ceased to be a matter of components—'work', 'recreation', 'home life'—they are all in relation to one another.

There are only too many organizations devoted to Utilitarianism, a few practising Preservation or Tidy-Mindedness; none championing Improvement. The REVIEW is going to provide one. Ever since *Outrage* it has had a stream of cries for help or advice: it attempted to channel them in a small way in the April issue and found that even more cases were sent to it. It can only do them justice with a permanent organization and it is therefore setting up a Counter-Attack bureau. The effectiveness of *Outrage* and *Counter-Attack* was greatly increased by the splendid treatment they received in the national press. In particular *The Observer* has been continuously active in supporting the campaign and the REVIEW is pleased to announce that the bureau will operate in association with *The Observer*, which has made a grant towards the running costs. *The Observer* will forward all requests for help and will also give details of cases under investigation; its circulation and rapid schedule, publishing a matter of days ahead, rather than the REVIEW's six weeks—will be an immense help.

In the REVIEW, 'Counter-Attack' will publish details of cases under investigation in monthly bulletins like that in the April issue (this month's is on page 451): each case will be followed through to the end, prodding and nagging local or national authorities for months on end if necessary. It will continue the Townscape and Landscape articles in the body of the REVIEW, and will also commission and publicize research and social studies about the very many *Outrage* subjects where there are many loose assertions and damn-all hard facts. But its main job is to help the public to the limit of its capacities: if you have a problem or want advice, write to

Counter-Attack

9, Queen Anne's Gate,

LONDON, S.W.1.

The bureau doesn't guarantee success, or anything like it, but, at worst, it will give the outrager a good run for his outrage. Any advice given will of course be free of charge: in some cases—such as tree lopping—it will have to be simply of the 'do-it-like-this' variety; in others, such as the Westgate fields at Chichester, reported on page 451, something of national importance is involved, requiring a REVIEW article and the widest possible publicity. The advice may sometimes be unexpected, for the bureau is committed to 'Improvement', and not to 'Preservation'; but it will always be genuine and never influenced by a 'party line', implicit or expressed. The bureau's only rule is that there are no planning rules or stock solutions: there are only places, the people who live in them and ways of enhancing or disfiguring them. No two places are the same, and no two solutions will be identical.

For a long time now the spirit of the place and the spirit of the inhabitants have stood outside the castle of planning, communicating with those in authority—in triplicate—through the 'usual channels'. It is high time to open the drawbridge and let them back in again; if the bureau can help to do that it will have fulfilled its purpose. Meanwhile, uncommitted, in the best sense, at a time when labels and -isms of every sort have never been more in evidence and have never meant less, it is prepared to say, to the whole non-visual, over-organized, under-humanized mess: Little Brother is watching you back again.





Gordon Cullen

The approach to the village of Ewell from London passes through two landscaped parks, Bourne Hall and Glyn House. The Hogsmill river springs on both sides of the road. The top drawing shows the scene today. At the precise point where continuity of the green belt and emphasis by water is most needed to articulate the village from its subtopian surroundings, subtopia has got there first, befuddling the clarity with a battery of irrelevant objects. Below, the scene as it could be making full use of trees and water to define and heighten the uniqueness of Ewell.



EWELL and HUYTON

A suburb of London and a suburb of Liverpool face the same problems, the suffocation and overwhelming of the genius loci by runaway technology which spawns, at an astonishing speed, its own hopeless world; placeless, neutral and without beginning, middle or end. This article attempts to show how the essential quality of locality can re-created out of growing chaos.

THE ROAD TO EWELL

The road from London to Ewell is, by British standards, fairly fast, but the ride is depressing if you observe the scenery. There is no need here to enlarge on the dreary, continuous ribbon development through which the road passes; it is, as the photographs show, typical subtopia. After half an hour's driving it seems that it must go on for ever and ever.

The story starts a little way outside the village for here the main road to Epsom sweeps past Ewell and a minor road takes us into the village; the bypass was constructed to preserve the village several years ago. This, then, is the picture today. Until recently a village lying in its own meadows it is now engulfed by subtopia and, even with the bypass, traffic, particularly buses (50 per hour), is forcing an internal explosion. Thirdly, the cancer of subtopia is attacking the internal structure of the village and signs of disintegration are evident.

As a result of this threefold attack the village is on the brink of disintegration. As a personality it is faced with extinction. And that would be a pity. This is not a sentimental attitude, it is practical sense for, if the feeling of identity goes, then we become nomads living in a world to which we do not belong for there is nothing to belong to.

The problem confronting Ewell, and a thousand other villages, is how to preserve or create or recreate the vital sense of locality and personality.

There is enough sense of place remaining in Ewell to call for action, in fact the transformation from subtopia to the village is quite dramatic. It is as though one had left a lunatic asylum and



Five views taken at random between London and Ewell. A continuous proliferation of small objects (and big objects made small by lopping) stretching endlessly from horizon to horizon.

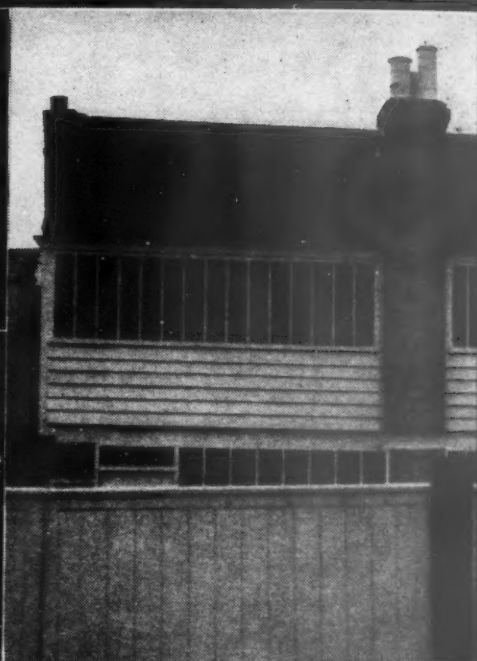


Do the people who live here have any relations? Do they ever go to a church or to a pub or play snooker? do they ever meet anybody? Are they human? Judging by their environment one would think not.





EWELL VILLAGE Suddenly, on entering Ewell, we are refreshed by the sense of locality: water which has not been concreted over, a High Street which is still a High Street and not a shopping parade, multiple use, a sense of scale greater than the sum of the parts and leafy pedestrian ways (for the preservation of which the local authority deserves full marks).



re-entered the normal world whose values you could understand. Houses are placed effectively, the road follows a small, tree-lined river across which lies rough pasture, noble unlopped trees spread over pond and lake revealing the strategically placed mansion and church tower (the mansion is placed on a slight eminence, lawns slope down to water below; yes, it's very straightforward and simple, but it is comprehensible and all of one piece instead of the nightmare outside which consists of single items, mean and tiny, proliferating separately for ever without sense). Then the High Street, unpretentious, right in scale, busy and compact, off which we see the central complex of builder's yard, school, garage, etc., etc.

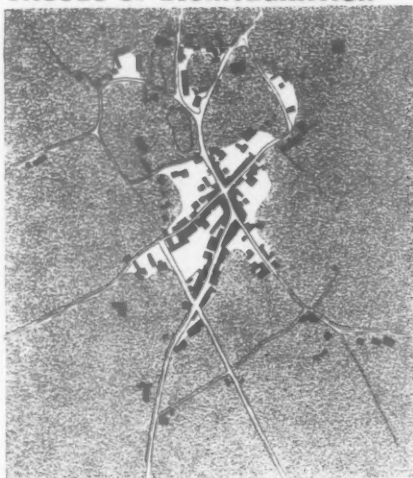
Like most villages the character of Ewell is complex. We can distinguish at least seven different kinds of character in the village. The riverside entrance road, the landscaped parkland, the High Street, the central complex of builder's yard, etc., Church Street, West Street and arcadia. All these different kinds of atmosphere go to make the vitality and variety of the village, but the first step in the process of establishing personality is to take them all together, to regard them all as one entity, just as eleven men of quite different sizes and skills and temperaments are called a team.

The only way to state this fact visually (for we get our knowledge through our eyes) is to differentiate the village from its suffocating surroundings, to pass from the outside world into the village through a neutral zone, however small, so that the break registers in the brain. This can still be done at Ewell since almost three-quarters of its perimeter is green. The riverside, Bourne Hall, the Churchyard, school playing fields, National Trust property along the bypass, the bird sanctuary and leafy pedestrian ways form a chain of grass and trees through which one passes to arrive at the village centre.

The first proposal, therefore, is to make this green belt appear green especially in the vital places, i.e., where the entrance roads pass through it. In other words we value greenery not only for its inherent pleasantness but also for the job it has to do in the scheme of things. Seen in this light it seems a mistake to befuddle the issue by erecting a public lavatory, a bus shelter, a police box, an air raid siren, and an ornamental garden at the precise point where continuity of the green belt in its simplicity is most vital (see frontispiece on page 408). Water, too, is a powerful isolating or defining agent, yet at this point it is hidden behind walls, one would not guess it was there at all. All the entrances should be examined in this way so that eventually the village achieves individuality.

The next step, moving into the village, is to find out what are the causes of internal disruption. Think of the village as a house (we have just come through the front door) with various inter-

CAUSES OF DISINTEGRATION



suffocation



Left, Ewell village in 1920. Right, Ewell today. The green areas represent large scale landscape, public or private, which could be seen by the villagers.



Internal explosion

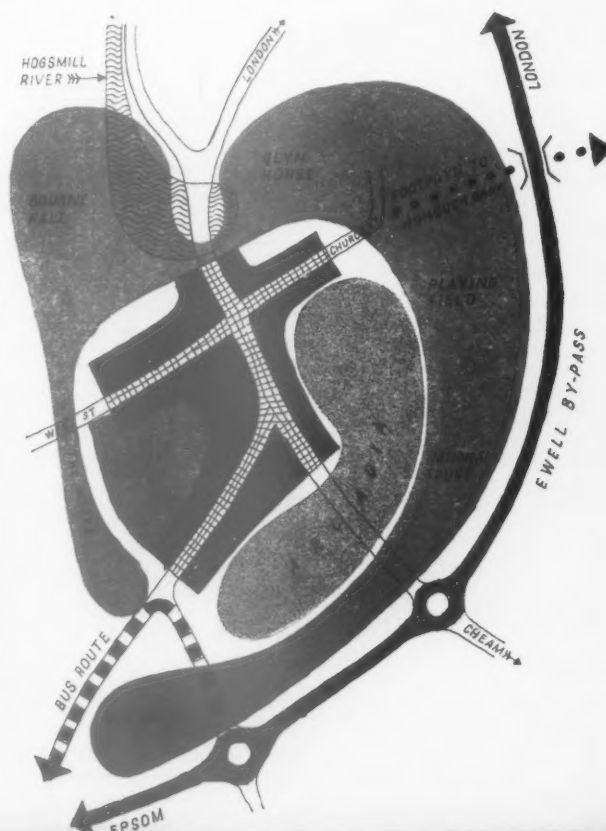


Left, High Street as it is early on Sunday morning. Right, as it normally is. With 50 buses an hour and private motorists, the pressure, inconvenience and smell are causing a very serious problem.

PROPOSALS

To combat suffocation the village should be encircled by its own natural green belt to form a visual break between itself and the outside world. To this end all available green space should be mobilized to complete the encirclement as shown on the diagram.

To prevent the disintegration of the heart of the town by traffic the buses should be re-routed along the by-pass and brought into Ewell along the Reigate Road to a bus station at the end of the High Street where it widens out, thence to Epsom (dotted line). Inside this overall plan the various subdivisions of the Town, High St., central complex, Church St., arcadia, etc., should be strengthened and heightened in character to achieve their own types of uniqueness—as demonstrated overleaf.



THE TECHNIQUE



High Street

Two views taken in different directions from almost the same spot. Left, a public garden is not a High Street, it is the negation of High Street and dissolves away the proper quality of trade and the offering of goods for sale seen in the view on the right.



communicating rooms each with their own special character. The main room is the High Street, the atrium. At present it is, at times, barely usable due to the buses and traffic. There are two alternatives, either to make the room bigger or to reroute the buses. Both are possible and, indeed, road widening has already begun. The simplest solution is to reroute the buses along the bypass and to bring them into the village along the Reigate Road where the High Street widens. This gives a fairly central bus station and preserves the High Street. (It would also have the effect of changing the status of the High Street from a Class I to a Class II road, thus enabling the very tall lamp-posts to be replaced by posts in scale with the street, at present the 25-foot posts stick up above the rooflines and make the street look silly.)

The first essential of a shopping street is pedestrian use of the road so that shoppers can cross and recross it at will. By road widening even more traffic will be encouraged to pass through the town and the problem thus aggravated. No, the best solution would be to regard the High Street as a shopping and business precinct, reroute the buses and impose a 20 m.p.h. speed limit on local traffic, and thanks to the bypass this is possible.

If, by these means, we can return the heart of the village to the pedestrians who use it, thus giving sense and meaning to the centre or atrium, we still have to tackle the problem of the disintegration of character.

For just as the whole village should preserve and emphasize its uniqueness so the several parts of the village should rejoice in their own particular uniqueness. Here are two examples of the disintegration of sense of place. Ewell probably has more gardens, front, back, public, private, than most other villages, yet there is another garden in the High Street. It is out of place, it tends to dissolve away the sense of High Street which should be a place of awnings and merchandise, of assembly rooms and chambers. Again, Church Street has its own particular character. It is street architecture of some sophistication leading slightly uphill where it changes character becoming more of a lane lined with tall trees and bringing one out to large isolated buildings, the Church tower, Ewell Castle school. The transition is excellent yet at the precise point of change the character is disrupted by the intrusion of a row of villas set back behind lawns and dragging the eye out at right angles to the dominant direction to little purpose. In this way the uniqueness of Church Street is compromised and Church Street is the dominant element.

If the process continues we end up with a series of separate objects having no relationship one to the other so that the sense of place is destroyed and we become nomads, dispossessed.



Church Street

Two views in Church Street, which has its own unique character of street architecture leading on to large scale planting. Left, the villas intrude and crack the street in half, thus speeding the process of disintegration. Right, the position of the villas in Church Street is shown by the green arrow. A wall or planting would preserve the street.



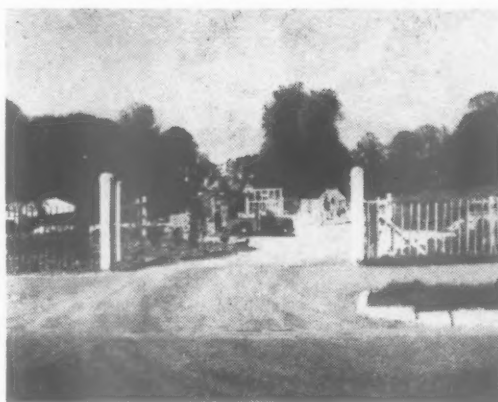
aroadia

Left, how not to do it; barren, treeless, anonymous, neither fish, flesh nor good red herring. Right, the proper approach in which one senses the right character of seclusion, of pleasure in the green bowers and grassy verges, of a proper sense of trim in hedges and furniture. It is difficult to imagine that the two views are quite close together.



Everybody has his own house but nobody has a village.

The argument must by now be apparent. Ewell is an old village and the prime purpose of this article is not preservation, but to try to pin point its one great asset—its sense of place. The heightening and sharpening of uniqueness of place is the main task, but whether this involves the actual preservation of particular buildings should be a separate question. Within this broad framework there is ample scope for modernization and development, but progress which keeps the High Street a High Street and not a suburban shopping parade, which keeps the village a unit and not just another slice of continuing subtopia.



perimeter

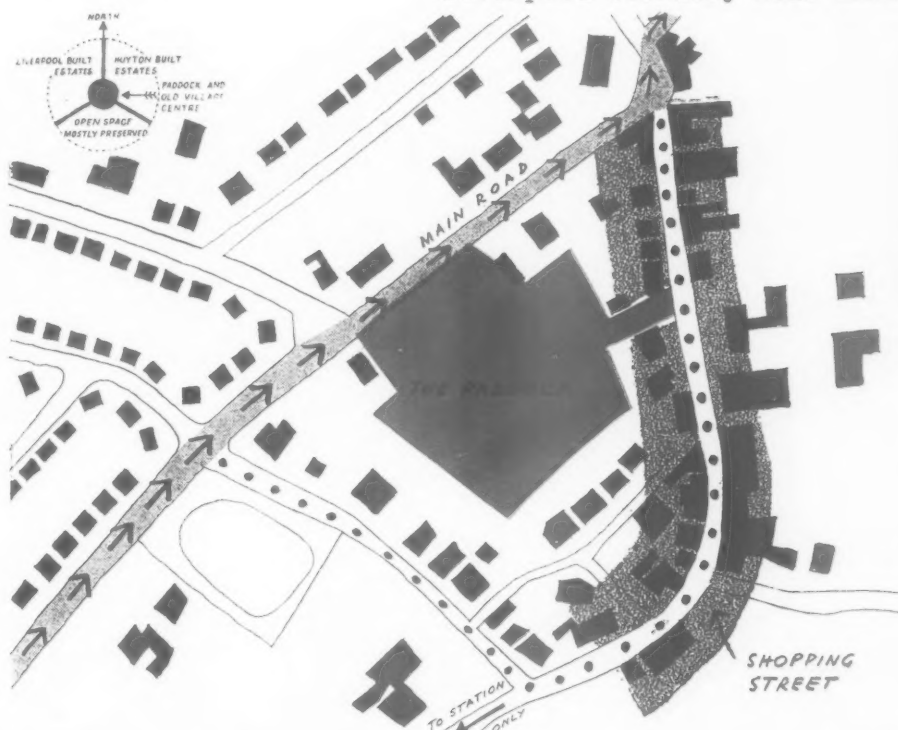


Two views of the perimeter of Ewell from the by-pass. Left, a vital piece of green belt is shown here in the process of disintegration. Right, the scene as it should be (and is, a little farther along). Across the allotments a vertical bank of poplars forms a green, decisive edge to the village which lies behind.

HUYTON

Ian Nairn

At Ewell, the threat is clear but not yet expressed. The next stage is the coup-de-grâce—the single blow which will shatter identity and make further resistance useless; and that is what is about to happen at Huyton, just beyond the Liverpool boundary near Knowsley.

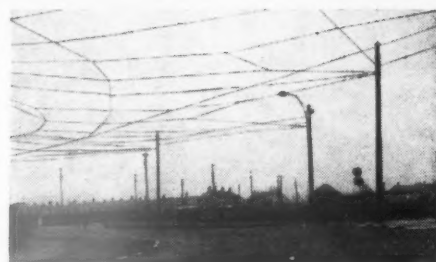


Huyton holds a startling and unenviable record: its population increased 970 per cent between 1931 and 1951 and is now 59,000. Nearly all of this was Liverpool overspill, most of it in Liverpool-built estates. Even so, there is still an intimate small-scale centre—a shopping street looping off the main road, enclosing a rough meadow called The Paddock. The U.D. (it wants to be a borough) divides like a roulette wheel, see above. The threat is a shopping arcade in the middle of The Paddock: the excuse is that the estates are badly short of shops. Opposition is battered down with language like "I had a secret ambition to see Huyton as a borough, but now I see that idea has receded

ten or twenty years through the machinations of some narrow-minded stupid egoists." Well, well. Now let's have some common sense:

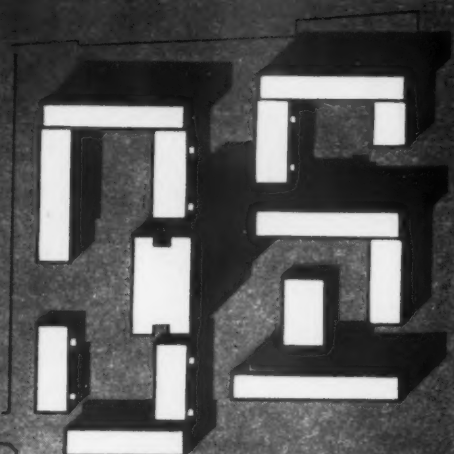
First and in particular, shops on The Paddock will be little use to the estate-dwellers who are said to want them. The Liverpool estates would be almost as far away as they now are from Old Swan and the other Liverpool suburban centres. The Huyton estates are mostly cut off by a railway. In both cases the answer is more shops on the estates themselves where they are desperately needed. The Paddock has just enough shops to serve the people who can walk there in comfort and it should stay that way.

Second and in general, Huyton isn't constructed



like a borough and never will be, except in a purely statistical Malden-and-Morden sense. Frankly, the north-west segment might as well go inside the Liverpool boundary—it is Liverpool-built for Liverpool people and there's no country or village centre left there to spoil. That would bring the population down to a size, say 15,000 people, which could then develop as a self-contained unit.

We are not putting forward the centre of Huyton as a beauty spot. It has nice scale, a lot of trees and the fine rough meadow (which must be kept rough and un-flower bedded), but the buildings around it are ordinary and there is a lot of mess, upper picture. But here is the blueprint for a delightful centre: preserve The Paddock and the possibility of realization remains: give it up and Huyton centre becomes one more no-place like the screaming wilderness of Horn Smithies, on one of the Liverpool-built estates, below.

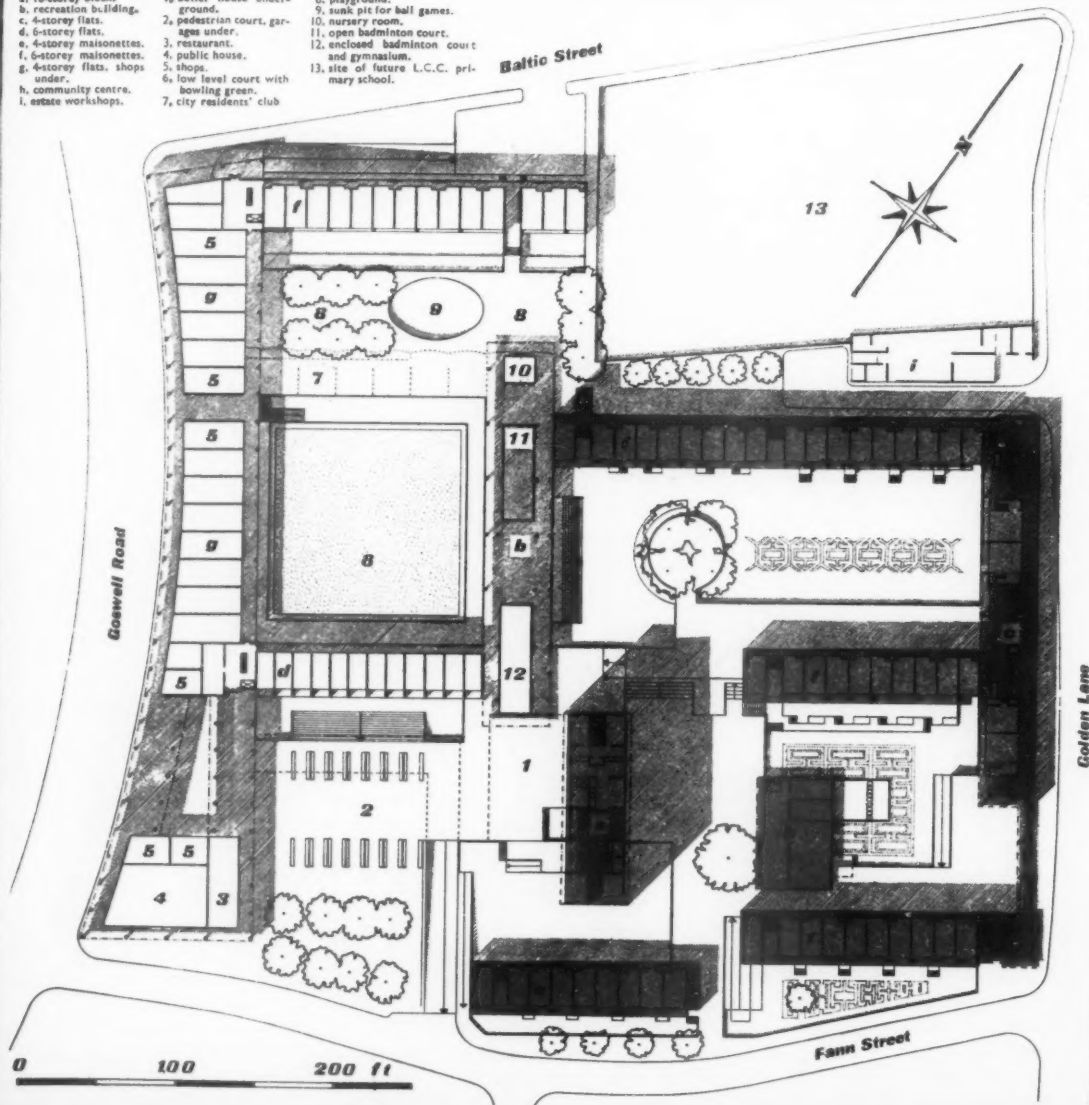


The Golden Lane housing scheme for the City of London was won in competition in 1952; the block plan, *left*, shows the original design. For a density of 200 people per acre this was felt to be too enclosed and oppressive, and the design was altered to give fewer and taller blocks and bigger courtyards. The site area was then increased from four to seven acres by including land up to Goswell Road, and the final layout is shown below. Half of this revised scheme is now complete and is illustrated on the following pages.

key. (areas completed are coloured green.)

- a. 16-storey block.
- b. recreation building.
- c. 4-storey flats.
- d. 6-storey flats.
- e. 4-storey maisonettes.
- f. 6-storey maisonettes.
- g. 4-storey flats, shops under.
- h. community centre.
- i. estate workshops.
- 1. boiler house underground.
- 2. pedestrian court, garages under.
- 3. restaurant.
- 4. public house.
- 5. shops.
- 6. low level court with bowling green.
- 7. city residents' club.

- 8. playground.
- 9. sunk pit for ball games.
- 10. nursery room.
- 11. open badminton court.
- 12. enclosed badminton court and gymnasium.
- 13. site of future L.C.C. primary school.



WOODBRIDGE HOUSE, NEW YORK

ARCHITECT: ROBERT ROSENBLUTH

1964





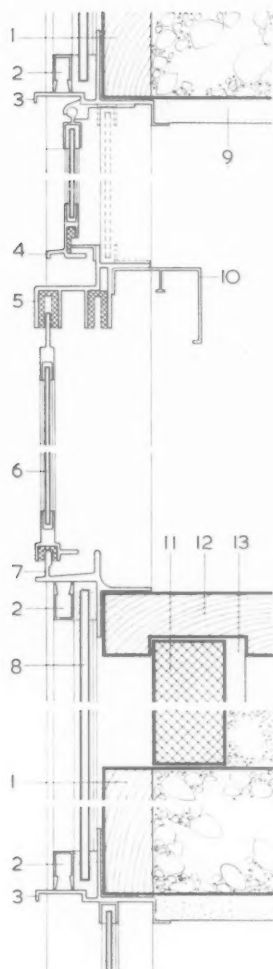
General The site is near the City of London boundary, $\frac{1}{4}$ mile N. of St. Paul's. It was completely cleared by bombing and had to contain one- to four-room flats at a density of 200 p.p.a., a community centre and a central heating and hot-water system. The need to create a sympathetic environment for the 1,400 people who will occupy this estate dominated the planning. The whole site is laid out as a pedestrian precinct; all public roads which formerly intersected the site have been closed and the main service road will be underground at the rear of the shops which flank Goswell Road. The public stairs, lifts and refuse chutes within the blocks of flats have been kept for the most part to the perimeter of the site so that service vehicles can serve the buildings from the public roads. The blocks contrast both in height and character; family flats and maisonettes are contained in the tower blocks and small two-room flats are planned in the central 16-storey block and in the block facing Goswell Road. The blocks divide the site into a series of inter-related courts, differing both in character and function. Main pedestrian circulation is at ground level while the more secluded courts are largely excavated to basement level. Of the nine blocks of dwellings, five are planned as maisonettes, and four as flats.

Block a provides 120 two-room flats on 15 floors with estate offices, hobby rooms and laundry rooms on the ground floor. Public circulation is concentrated at each floor level in a central corridor served by two lifts and connecting escape staircases at the north and south ends. All bedrooms are approached through the living-room to avoid the inclusion of an internal corridor. Emergency escape doors are provided leading directly from the bedrooms to one or other of the public lobbies or staircase landings; half of the living-bedroom partition can be opened so that these two rooms may be used as one.

The structure is a concrete egg-box; 9-in. r.c. cross walls of uniform thickness (9 inches) occur at 20-ft. centres, and r.c. hollow-pot floors eight inches thick at every 9 ft. The reinforced concrete roof superstructure is supported on the cross walls beneath. The projecting balconies are cantilevered from upstand beams forming the external wall of the kitchens and bathrooms.

The north and south end concrete walls are heavily pick-hammered and finished with a gritty grey paint. The return walls to the staircases and the projecting balconies are fairfaced concrete similarly painted. The main elevation to the living-rooms and bedrooms of the flats are clad with clear or yellow opaque glass, held in aluminium frames; opening lights slide horizontally or are in the form of top hung night ventilators. Kitchen and bathroom windows at the back of the balconies are in softwood frames. The flat roof has a vermiculite insulating screed, asphalt, and *in situ* reinforced sand and cement screed topped with pebbles. The exposed concrete at ground and basement levels is pick-hammered and painted black.

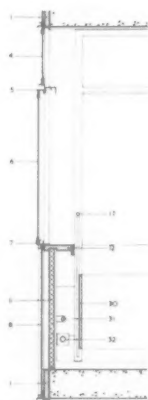
All flats are centrally heated by finned tube convectors behind panels beneath the window cills. All the main services are distributed horizontally beneath the ceiling at basement level and, at roof level, the cold water feed and supply pipes and the vent pipes from the calorifiers are collected together and carried horizontally in the pergola to the centre of the building.



enlarged vertical section.

key to all sections.

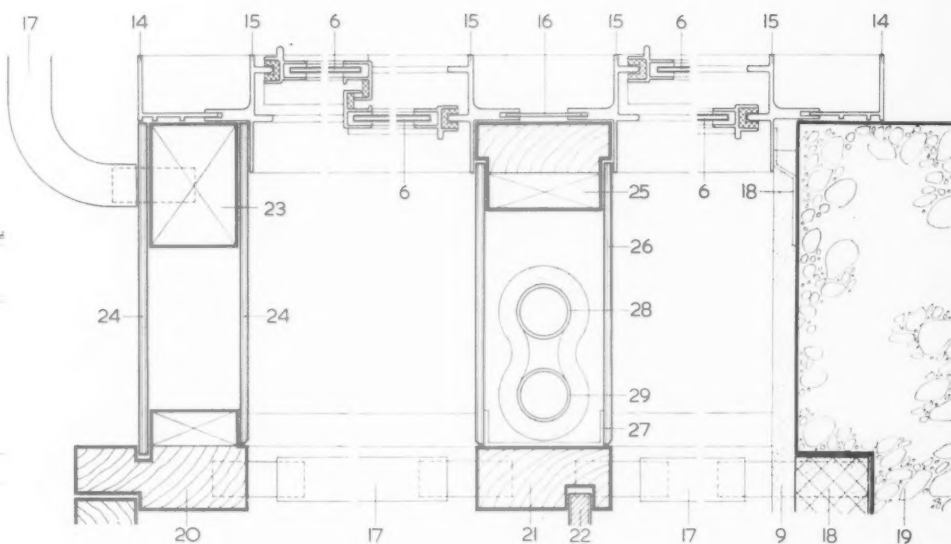
- 1, Hardwood permanent shuttering secured to reinforced concrete floor with rag bolts.
- 2, Aluminium 'clip-on' glazing bead.
- 3, Aluminium head member.
- 4, Aluminium framed top-hung opening light.
- 5, Aluminium transom member.
- 6, Aluminium framed horizontally sliding opening light.
- 7, Aluminium sill member.
- 8, Yellow 'Muroglass.'
- 9, Plaster.
- 10, Aluminium curtain rail and pulley.
- 11, 2 in. thick molar brick fire-break.
- 12, Softwood sill.
- 13, Rendering.
- 14, Aluminium edge framing, bedded in mastic.
- 15, Aluminium outer frame to windows.
- 16, Aluminium cover plate to mullion.
- 17, Tubular steel guard rail.
- 18, Cramp securing window frame.
- 19, Reinforced concrete wall.
- 20, Softwood balcony door frame.
- 21, Softwood frame to living room/bedroom partition.
- 22, 'Verbundplatten.'
- 23, Softwood post.
- 24, Plywood.
- 25, Softwood mullion.
- 26, Removable plywood panel.
- 27, Bent steel fixing bracket.
- 28, Central heating flow main, lagged.
- 29, Central heating return main, lagged.
- 30, Aluminium faced plywood panel.
- 31, Central heating branch return pipe.
- 32, Finned tube convactor.



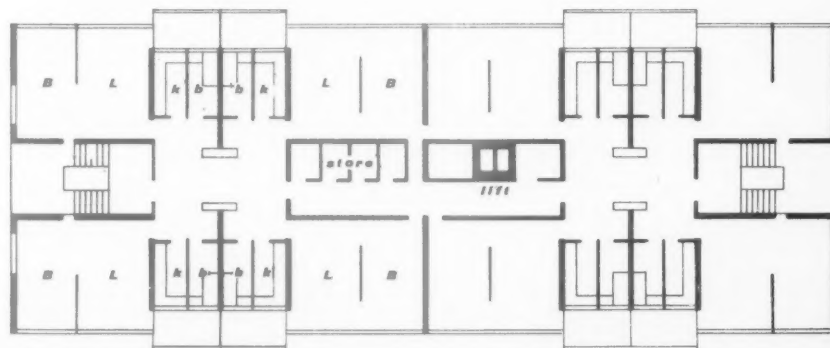
key section.
through one floor of
cladding



HOUSING IN GOLDEN LANE: Block a



enlarged horizontal section.

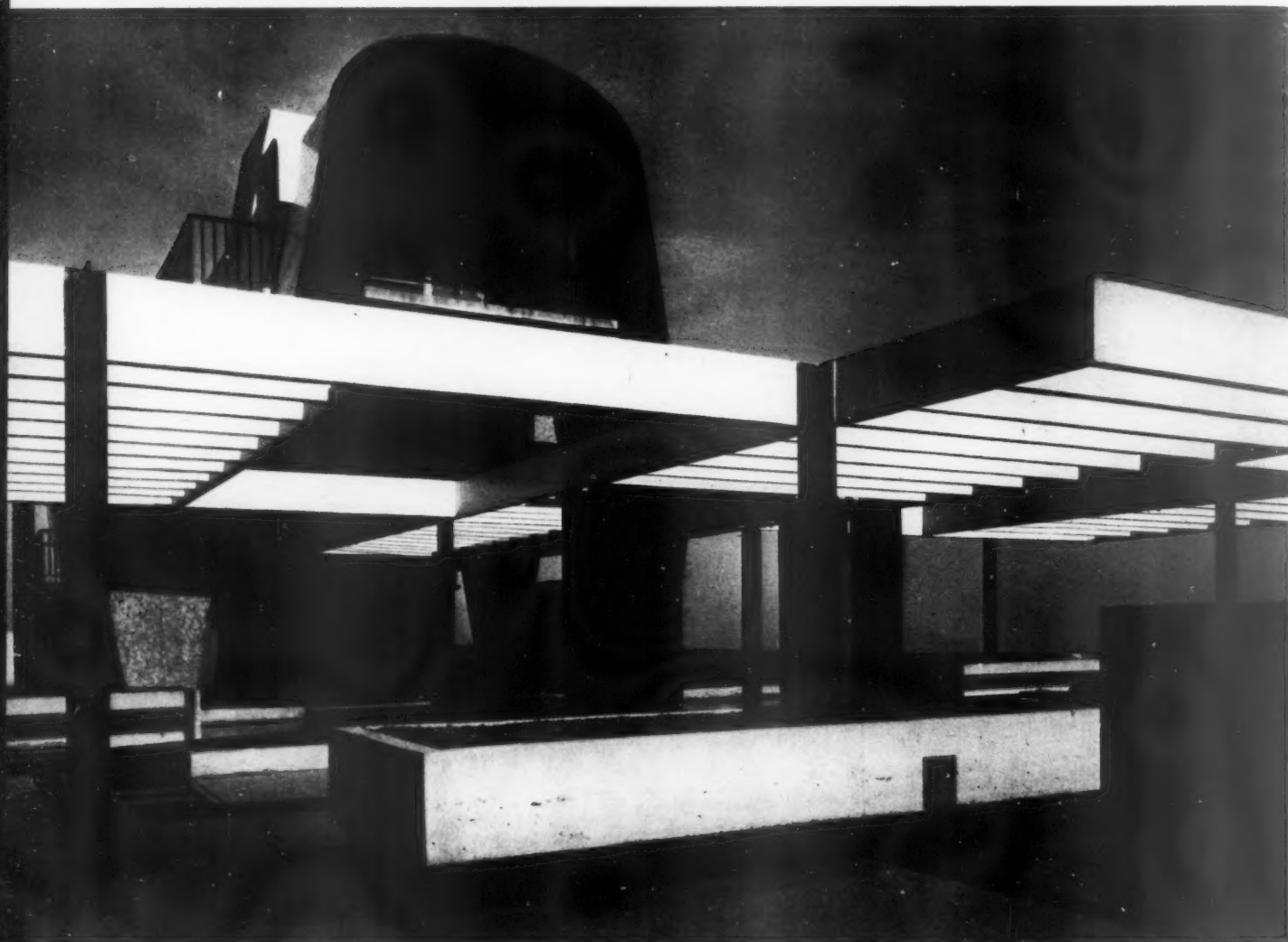


typical floor plan. scale 1/16 in. = 1 ft.

2, looking upwards at the south end of Block a (called Great Arthur House) showing the balconies on the west elevation and the recessed external stairs on the south elevation diving the two banks of flats.
3, the west elevation seen from Goswell Road across bombed sites south of Fann Street.
4, interior of one of the flats showing the sliding screen between living room and bedroom.



5

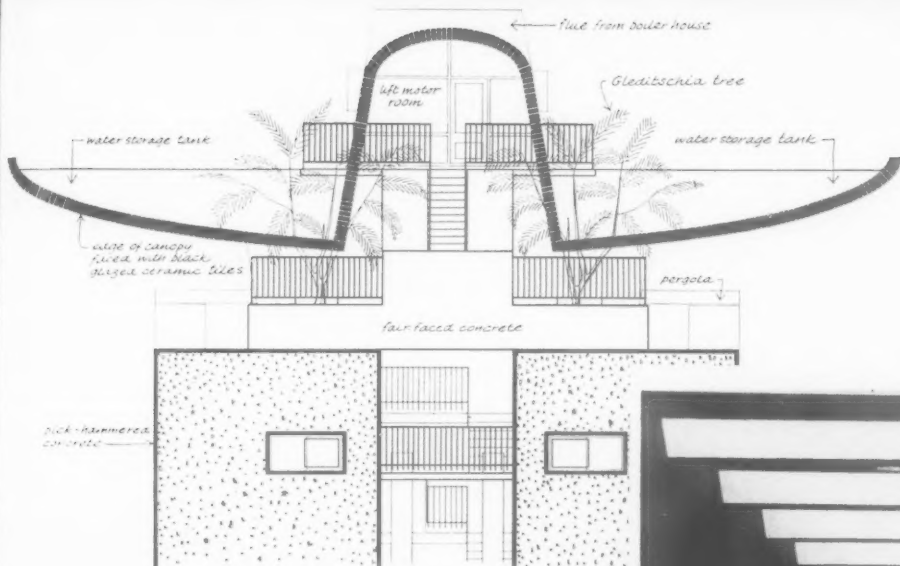


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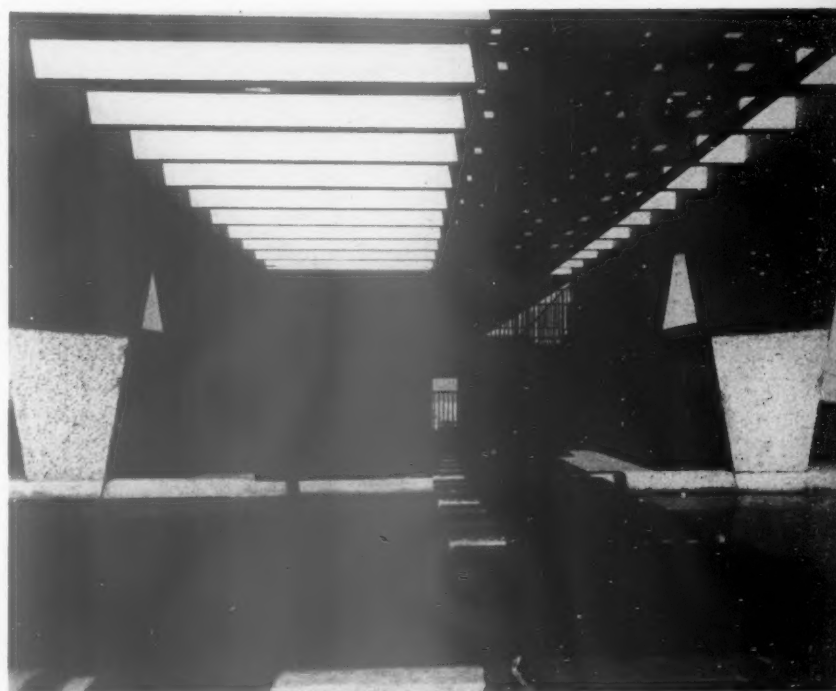
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HOUSING IN GOLDEN LANE: Block a roof

5 and 7, panoramic views from western and eastern arms of the roof canopy respectively. 6, roof terrace showing seat, plant box, pergola and canopy over the lift motor rooms. 8, looking north over the stepping stones across the pool.

Block a: roof The flat roof is laid out as a terrace for the tenants in the upper floors. The functional elements above roof level—including the flue from the boiler-house, the water-storage tanks, the lift-motor rooms, etc.—are grouped together in a superstructure raised above roof level which forms a canopy over part of the roof. The terrace includes a decorative pool, paving, seats, plant boxes and a pergola. All the concrete of the superstructure, flower boxes, etc., is fair-faced except the legs supporting the superstructure which are pick hammered; the edges of the oversailing canopy are protected with black glazed ceramic tiles. The lift and duct enclosures are constructed of black glazed bricks. A projecting rail for window-cleaning cradles is included. The canopy edges catch the rising and setting sun while the midday sun is reflected from the pool on the roof on to the underside of these canopies.





NOUS

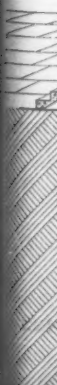


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4 ROOM
MAIS

3 ROOM
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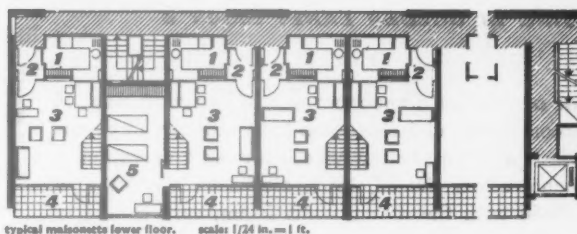
3 ROOM
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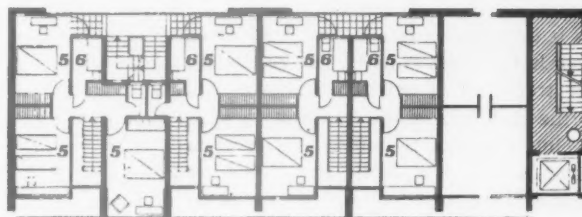
HOUSING IN GOLDEN LANE: Blocks e and f

9, south elevation of four typical maisonettes
The double height window in the lower pair is in front of the stair well and contains a heating coil. 10, view of south-east corner of the site from Golden Lane, showing the typical arrangement of lift, stairs, refuse chute and water tank at the end of a block. 11, staircase in typical 3-room maisonette. 12, south elevation of 6-storey maisonette block. The 'pairing' arrangement of the maisonettes is used to obtain an elevational order large enough to be in scale with the whole of the building. 13, kitchen with access gallery on left, and living room on right, seen through large glazed panels to increase apparent size and allow for child supervision. The blocks are named Cuthbert Harrowing House, Bowater House, Bayer House and Basterfield House.

key to floor plans
1, kitchen.
2, hall.
3, living room.
4, balcony.
5, bedroom.
6, bathroom.

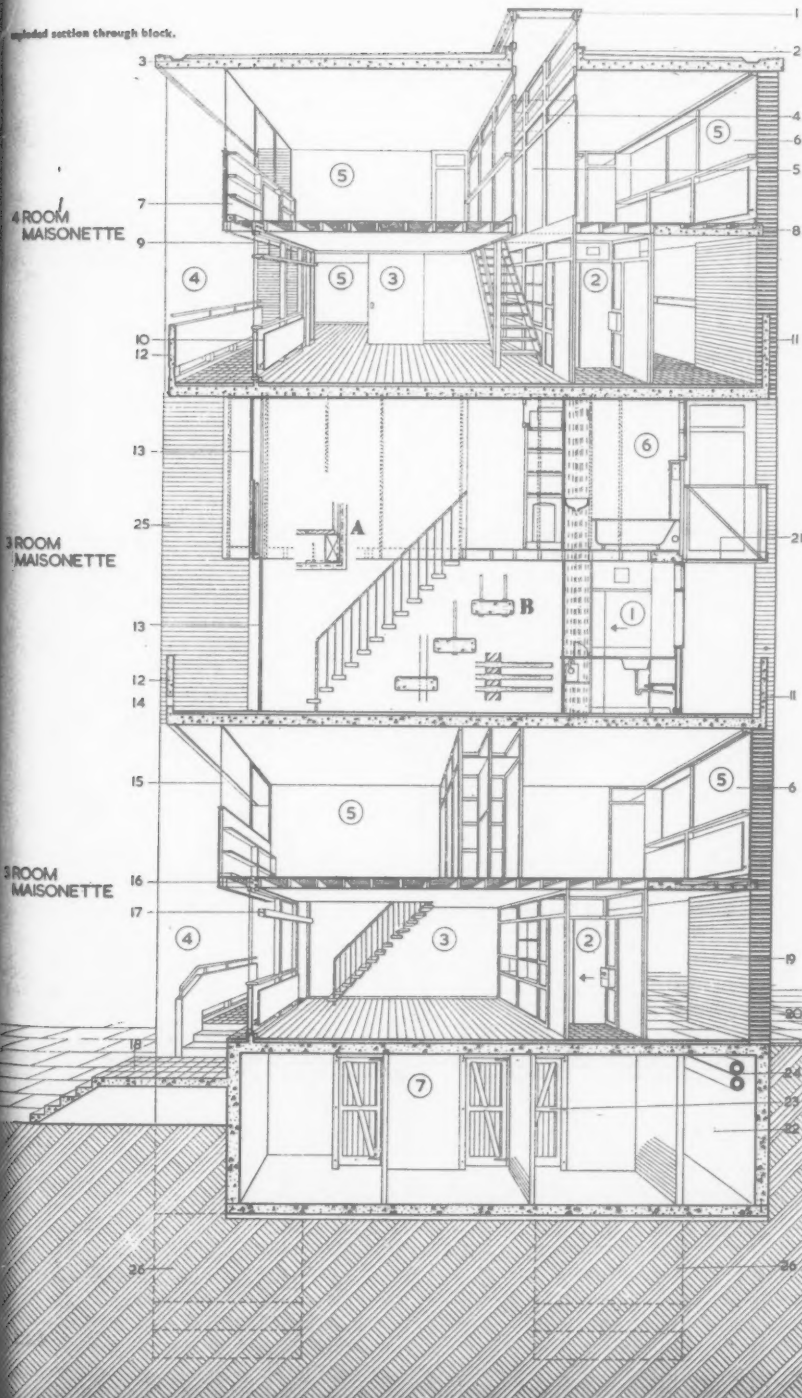


typical maisonette lower floor. scale 1/24 in. = 1 ft.



typical maisonette upper floor.

uplifted section through block.



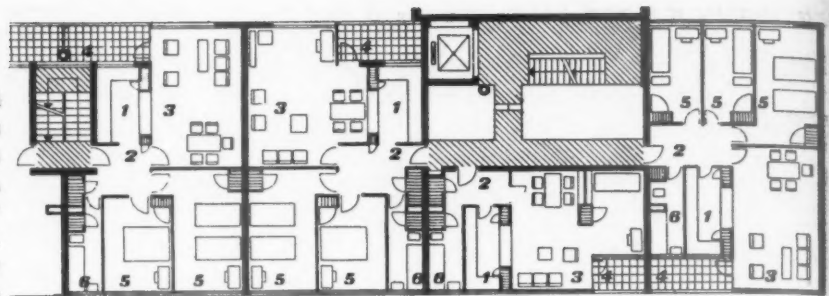
key to section. Ringed numbers correspond to numbers on floor plan.

1. 3-ply felt on tongued and grooved softwood boarding, fascia in sheet aluminium.
2. Hardwood cill on concrete upstand protected by lead flashing.
3. Reinforced concrete roof covered with 2 in. screed, asphalt and marble chippings.
4. Standard 4 in. by 2 in. softwood framing used for all internal framed partitions, extends through two floors to the top of the roof light.
6. The curtain track extends over inside face of brick pier.
9. Frameless sliders in polished plate with full height grip and draught excluder running in felt fixed on site into groove in hardwood frame.
10. External cladding is 3/16 in. sheet glass above cill and 3/8 in. plywood below cill bedded in putty and fixed to 7 in. by 2 in. hardwood frame by 2 in. by 1 in. hardwood battens from the outside.
11. All visible concrete fairfaced, and where exposed to the weather left unpainted. The balcony upstand on the north is structural and continues through brick piers.
12. Concrete balcony front, not structural.
13. Glazed aluminium door to balcony sliding vertically and counterbalanced by top light which, for easy cleaning, can be lowered 4 feet above floor level. The bottom glass panel is in toughened sheet for safety. The heating coil above the door prevents cold down draughts and, being fixed within the depth of the aluminium frame, cannot cause any pattern staining.
14. 1 in. hardwood veneer floor lightly nailed to 2 in. by 1 in. battens on 6 in. wide strips of 1/2 in. insulation board which rests on the concrete floor. The floor boards are nailed to the concrete only on the perimeter of the room and in the centre, in order to reduce sound transmission to a minimum.
15. Aluminium sliding windows designed to over-ride for easy cleaning.
16. Flow and return pipe to heating coil (13) provide heating to south bedroom via duct in timber floor, provided with aluminium 'hit and miss' ventilator.
17. Projecting curtain track and pelmet across window and balcony door.
18. Private stairs, concrete—finished in blue quarry tiling providing access to sunken courts from ground floor living rooms. 13 1/2 in. flint brick piers purple sand/lime facing bricks with cased weather pointing used on all external brickwork throughout.
20. Concrete paving flags on north side carried through into access gallery.
21. The floors of the escape balconies between north bedrooms are purpose-made mild steel grilles, shot-blasted and galvanized.
22. Basement corridor fairfaced concrete walls finished in emulsion paint.
23. Basement stores with braced, ledged and battened doors hinged from softwood plates bolted through 3 in. on edge brick partitions.
24. Site heating ring mains suspended from concrete ceiling.
25. 9 in. structural cross walls in semi-engineering bricks on ground and first floors, and fleecings on the top four floors.
26. Reinforced concrete foundations taken down to ballast level.
- A. Plaster partition on expanded metal fixed to 1 1/2 in. by 1/4 in. mild steel strap hangers supporting timber bedroom floor.
- B. Precast cantilevered concrete treads bedded in and running across 9 in. brick walls with fine inserts on top surface.

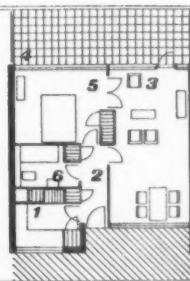
Blocks e and f provide 104 two-bedroomed maisonettes and 28 three-bedroomed maisonettes. The width of 14 ft. 1 1/2 in. between centre lines was found to be the practical minimum for three-room maisonettes with externally ventilated and lit bathrooms. The two-storey maisonettes are arranged on three levels with gallery access on the north side. The galleries are modulated by recessing the paired entrance doors opposite the brick piers and by introducing open grilles to the bedroom level escape balconies, improving daylighting of the kitchens below. On the south elevations the party walls extend at either end of the balconies providing complete privacy between adjacent flats, which thus become in effect individual two-storey dwellings in a terrace. Within this framework the large windows and the glazed screen between kitchen and dining space combine with the double height of the stairwell to give a greater impression of spaciousness than the dimensions suggest (17 ft. 9 in. floor to floor between maisonettes; clear width 13 ft. 4 1/2 in.).

HOUSING IN GOLDEN LANE: Block c

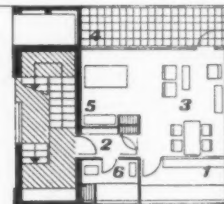
Block c provides 8 one-room flats, 8 two-room flats, 14 three-room flats and 2 four-room flats. Most living-rooms face west into the site but where the west elevation is overshadowed by the adjoining blocks a different plan is required with the living-rooms facing east. Similarly at the junction of blocks a one-sided plan is necessary. Owing to the different orientations of the flats, balcony access is impractical and the majority of flats below the top floor have access in pairs. The ground floor is affected by the traffic and passing pedestrians in Golden Lane along the east face of the building; a narrow one-room flat facing west has therefore been designed which because of its reduced depth allows the formation of a covered colonnaded pavement along the whole frontage to Golden Lane. On the top floor lift access is needed and consequently an access gallery connects with the existing lifts and stairs in adjoining blocks. These flats also have generous private balconies and form a continuous penthouse. The construction is composite r.c. and brick with hollow-tile floor slabs. The loads are carried by upstand beams at first-floor level on the line of the party walls, and the floor slabs span from party wall to party wall. The slab edges in the two middle floors are painted glossy white to contrast with the black strip of cill panel of varying height. This black strip is formed by casting an additional thickness of 1½ in. to the concrete wall and coarsely pick-hammering the greater part away. This very rough texture is then painted with black composition. The recessed ground- and top-floor flats have unobtrusive finishes: grey paint on the top floor and blue engineering bricks on the ground floor.



first and second floor plan. scale: 1/24 in. = 1 ft.



typical ground floor flat.



typical top floor flat.

key.
1, kitchen.
2, hall.
3, living room.
4, balcony.
5, bedroom.
6, bathroom.

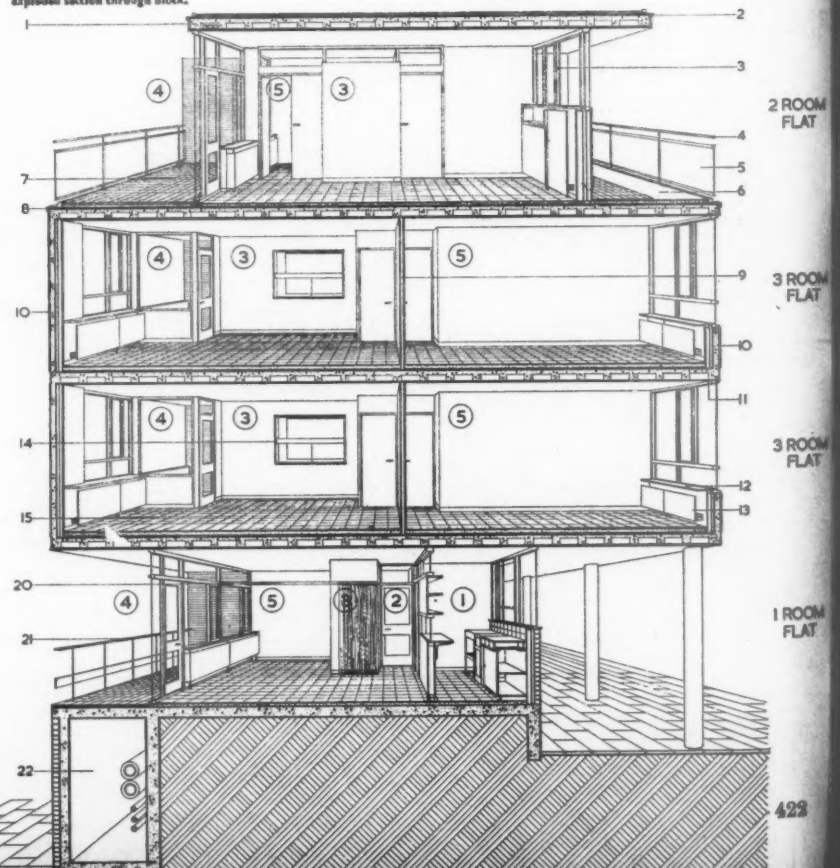
14
15 | 16

14, the estate from Golden Lane with Block c (Stanley Cohen House) on the right; the covered colonnaded pavement joins it to Block f. 15, the north-west corner of Block c, showing the sepi bush-hammered finish to the concrete wall surface. 16, Block c from the sunken court, with covered pavement on the right.

key to section. Ringed numbers correspond to numbers on floor plan.

- 1, Hollow tile slab. 1 in. fibre glass quilt, 1 1/2 in. screed, 3/4 in. asphalt. Sparmat finish.
- 2, Zinc flashing.
- 3, Softwood window frames. Opening lights only of standard steel section.
- 4, Standards and rail of 1 1/4 in. bore mild steel tube. Horizontals of 1 1/2 in. by 1 1/2 in. mild steel site welded.
- 5, 1/4 in. rough cast Georgian wired glass.
- 6, 3/4 in. asphalt on screed and 1 in. fibre glass quilt.
- 7, 6 in. by 6 in. quarry tiles on screed and 1 in. fibre glass quilt.
- 8, Zinc flashing.
- 9, 3 in. block partitions.
- 10, 3 in. block internally: 1 1/2 in. cavity; externally, 4 1/2 in. reinforced concrete wall with an additional 1 1/2 in. for rough pick hammering as finish.
- 11, Softwood board flush with plaster to accommodate curtain tracks.
- 12, African mahogany window board.
- 13, Gilled tube convector heater concealed by aluminium faced asbestos panels.
- 14, Hardwood framed hatch to kitchen with 1/4 in. polished plate sliding panels.
- 15, Marley tiles on screed and 1 in. fibre glass quilt in all rooms except kitchens.
- 16, Kitchen shelf and counter unit with glass hatch and glazed strip over.
- 17, 6 in. by 6 in. glazed white tiles on 3 in. block wall. 1 1/2 in. cavity, externally 4 1/2 in. wire cut blue engineering brick.
- 18, Fairfaced concrete columns painted.
- 19, 6 in. by 6 in. blue quarry tiles to all kitchen floors in the block.
- 20, Tubular aluminium curtain track separating the bed recess from the living area.
- 21, African mahogany rail and knee board on 1 1/4 in. bore mild steel tube.
- 22, Duct for heating ring main and services to the block.

exploded section through block.





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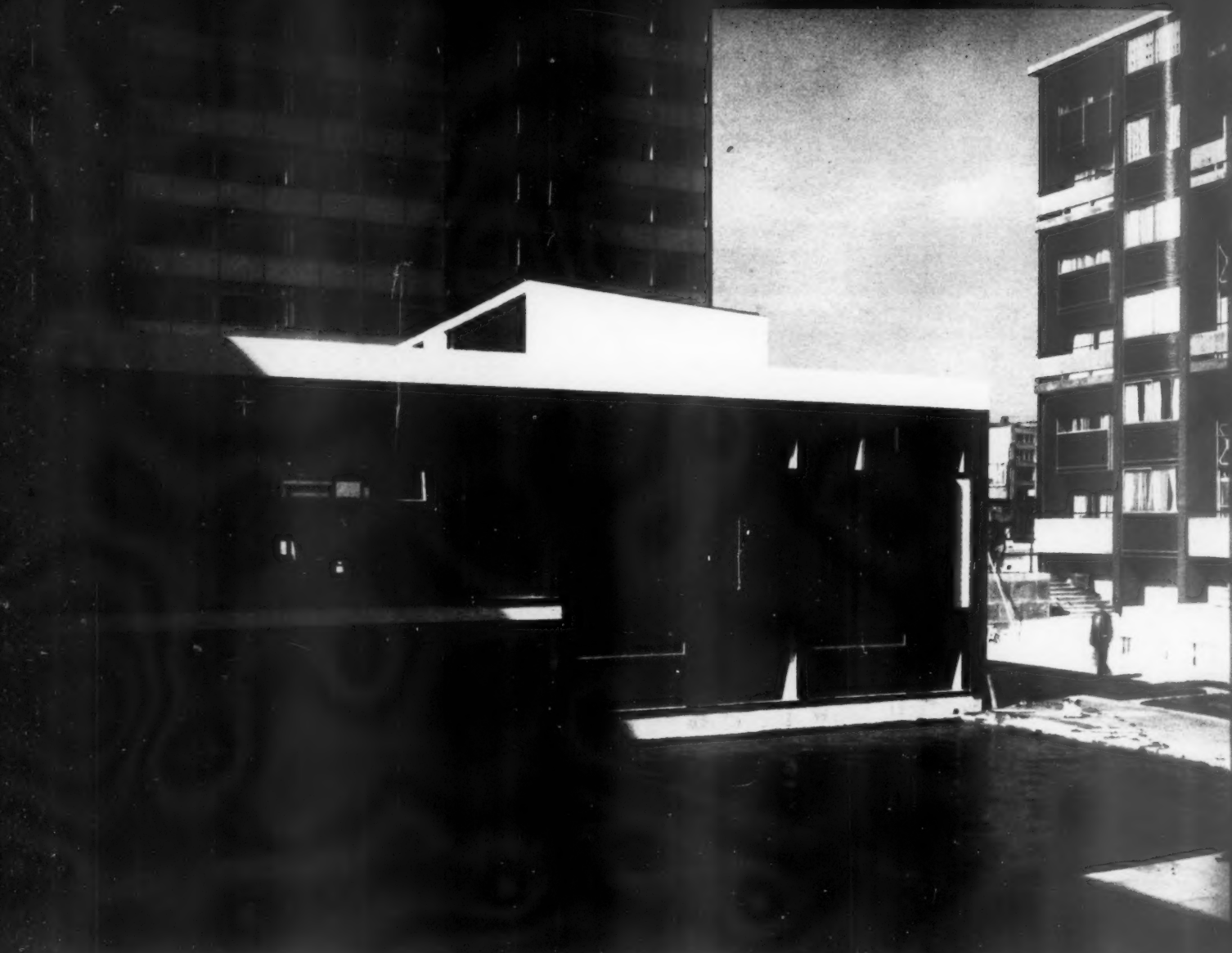
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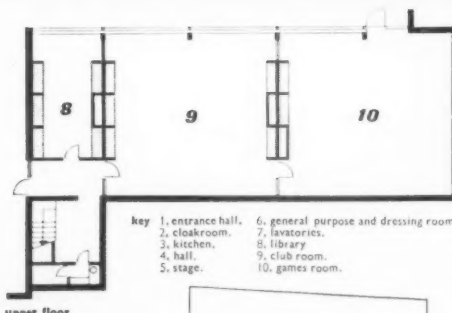




17



lower floor

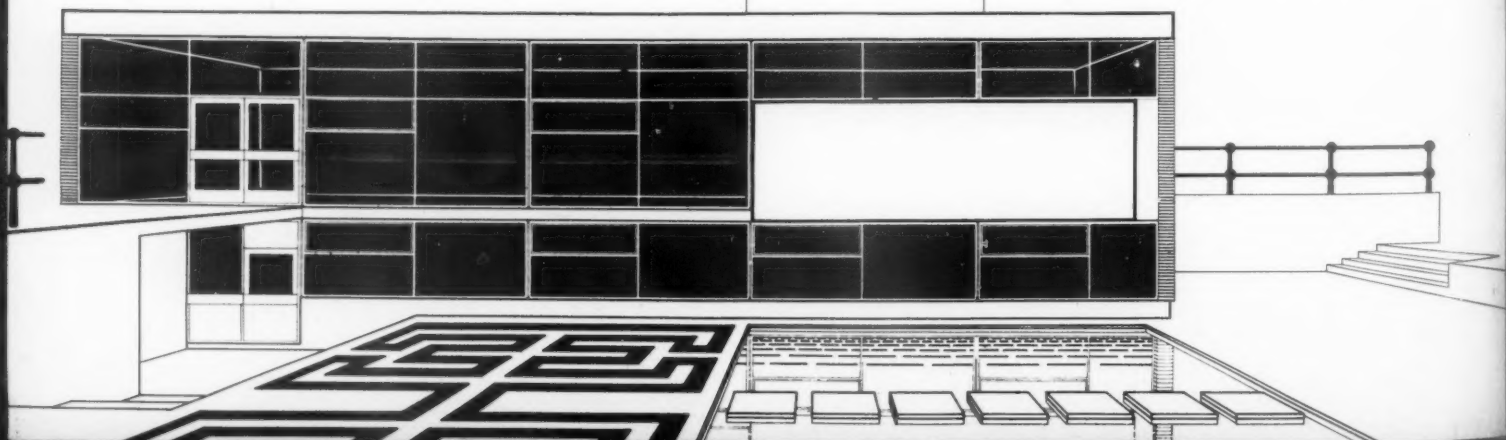


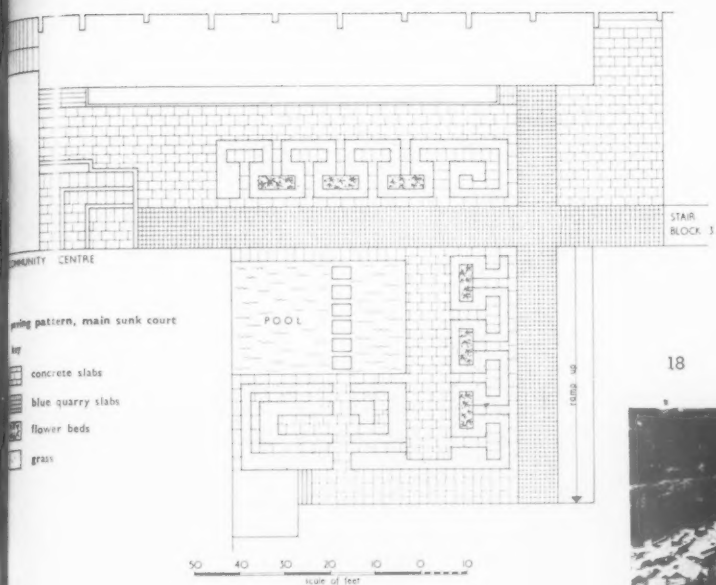
upper floor

- key 1, entrance hall, 6, general purpose and dressing rooms.
 2, cloakroom, 7, lavatories.
 3, kitchen, 8, library.
 4, hall, 9, club room.
 5, stage, 10, games room.

17, east elevation of Community Centre from sunken court level. Glazing bars and glazed tiles to the solid panel are black here and white on the west (piazza) elevation. The pool will have stepping stones as shown in the drawing below.

HOUSING IN GOLDEN LANE COMMUNITY CENTRE AND LANDSCAPING





18, the cylindrical 'bastion' partly encircled by a ramp and containing four white poplars at the north end of the main piazza. 19 and 20, two sunken courts which are normally viewed from above and have therefore been developed with a strong two-dimensional pattern of paving slabs and grass. 19 shows the block facing south at the E. end of Fann Street. 20 shows the main sunken court with Community Centre in foreground.

Community Centre contains a hall to seat 200 persons with a permanent stage and changing-room on the upper floor (piazza level) and a youth club on the lower floor (sunk court level). The construction is composite reinforced concrete and brick. All the external finishes are permanent, except the painted edges of the roof and floor slabs. Load-bearing external walls are of pressed blue-black engineering bricks with black pointing.

The assistant in charge for the scheme was Watcyn Williams; the assistant architects were Robert Ashdown, Eric Carpenter, Ross Chisholm, Peter Deakins, John Honer and Peter Honer. The consultant structural engineers were Ove Arup & Partners; consultant heating engineer, H. J. Knox; quantity surveyors, Davis, Belfield and Everest.

18



19

20





21. St. Paul's seen through the pergola on top of Block a.

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BOMARZO 2



Almost three years ago the REVIEW described and illustrated Vicino Orsini's fantastic gardens at Bomarzo in Italy. Since that time they have come under further scrutiny, from the authorities, with a view to their physical conservation, from scholars, with a view to their iconographical elucidation. In unravelling the relationships of the Bomarzo statuary to such emblematic sources as the *impresa d'amore*, 1, of Lorenzo de' Medici, Dr. Lang, in her article below, uncovers an attitude to the *genius loci* that would make any cleaning-up by the authorities the very worst form of conservation.

The Institute of Architectural History of Rome University has mobilized a team of research students to explore the monsters of Bomarzo.¹ Their findings were published in the *Quaderni* of the Institute in April, 1955.² Their date, the early 1500s, has been confirmed but the sculptor is still not known. We now know that the gardens were considered to be a *Sacro Bosco*, a sacred grove, from one of the many epigraphs. Other epigraphs refer to the Seven Wonders of the World, others again to the Colossus of Rhodes and to On. One epigraph varies L. B. Alberti's *Impresa*. *Quid tum to Quid ego*, another line 'elephanti leoni orsi et draghi' makes one think of Petrarch's line 'Orsi, Lupi, Leoni, Aquile et Serpi'³ although Petrarch's name have nothing to do with the statues at Bomarzo; yet another—and that is rather interesting in a connection to be discussed later—runs as follows: 'Non viri locis sed loca viris honestantur.' However, it is impossible to repeat all the epigraphs as it is also impossible to give even the gist of the results published in the *Quaderni*. In this article only a few observations shall be made on some iconographical details which seem to have escaped the authors' notice. Several scholars, pointing to the strange orientalisms of some of the figures have assumed oriental influence.⁴ But just for the two most outlandish looking groups prototypes exist much nearer home.

The elephant and castle

The Elephant and Castle motif as a venerable ancestry in European art. Representations of it were made throughout the Middle Ages and what elephants looked like could be gleaned from many Roman coins, although the beasts in mediaeval manuscripts, had little resemblance to the real thing. But already the elephants of Sigismondo Malatesta of the second half of the fifteenth century looked like elephants and

so did an 'Elephant and Castle' on the title page of the Parisian *Ovide Moralisé* of 1515.

The representation in Bomarzo of the Elephant and Castle is of a special and rare kind.⁵ 2. The elephant carries in his trunk a man in what seems to be Roman military dress, his right hand hanging down holding an object or part of one. There is only one variant of the Elephant and Castle where a man is held by the elephant in that manner and that is in the biblical story of Eleazar in the *Book of Maccabees*. Eleazar to rescue his people kills the elephant of King Antiochus V Eupator by splitting his belly: he is killed in his turn by the collapsing beast. This episode was interpreted as a prefiguration of Christ's sacrificial death. The scene had been depicted, though not very often, in the Middle Ages once e.g. with Eleazar simply lying under the elephant, 4; more recently Bosch had shown the hero held by the elephant's trunk as in Bomarzo, 3.

the lion and the dragon

Close to the elephant stand the group of a dragon being attacked by a lion and a lioness, 5. This group even more certainly than that of the elephant is an adaptation of existing engravings; the engravings in question in this case going back ultimately to a design by Leonardo.⁶ The meaning of this fight between dragon and lion has been lost (it was possibly political); whether it was still known to the promoter of the sculpture we cannot tell.

Leonardo's drawing has not survived; but Lomazzo refers to it and several copies exist.⁷ The British Museum possesses an engraving by Lucantonio degli Uberti,⁸ 6, and two or three others are known, that means half a dozen sheets in all—not much really. So, like the elephant and Eleazar, this group of the dragon is modelled on an iconographical scheme well out of the ordinary; but still following an existing pattern and not representing a new invention.

The case of the Woman on a Tortoise, 7, is more complex still. Pausanias talks of a statue by Phidias of Aphrodite who stands with one foot on a tortoise;⁹ the idea being, so Plutarch tells us, that the woman should stay at home and keep silence.¹⁰ But in Bomarzo the woman standing on the tortoise is a Fortune on the ball and not a Venus (it could be a Venus Marina; but it is unlikely even in Bomarzo that a Venus Marina should stand on a tortoise). Only one instance of a Fortune on a Tortoise is known to me and that is in Jean Cousin's *Book of Fortune* of 1568,¹¹ that is a few years after the probable date of the monsters. Cousin's Fortune is captioned 'Subrepunt Prospera Fata' 'Happiness arrives slowly.' She, incidentally, does not stand on a ball, but there is one drawing in the book called 'Fortune Occasio' 'Opportunity of Fortune' with a Fortune on a ball. What the connection between Bomarzo and Cousin was is impossible to say; there was possibly a common source: a Fortune with a tortoise is represented in one of Vasari's frescoes in the Sala degli Elementi of the Palazzo Vecchio. That Vasari's figure was a fortune is certain from his *Ragionamenti*, a dialogue in which he explains the frescoes to Cosimo de Medici:¹²

'È la fortuna di Sua Eccellenza, quale, per obbedire a Saturno, pianeta suo, gli presenta la vela e la testuggine (impresa di Sua Eccellenza) dimostrando che con la natura e tardità del cammino di questo animale, e la velocità che fa andare i legni nelle acque, la vela, nel mare delle difficoltà e l'essere Sua Eccellenza temperato sempre riuscire con bona fortuna in tutte le imprese del suo governo.'

The tortoise is to express slowness, the sail speed and the whole is to signify the good ending of all enterprises of the Duke.

Vasari's *Ragionamenti* were only posthumously published by his nephew in 1588; the printed text would

therefore have been too late for Bomarzo. Moreover this first edition did not contain this passage; all this seems to indicate that the author of this conceit must have been familiar with Vasari's manuscript and possibly a friend of his. We will see later that there are other indications pointing to Florence as one possible source of inspiration.

It is true that in Vasari's fresco Fortune holds the tortoise under her arm, but the designer of the Bomarzo group may have combined Phidias' Aphrodite with Vasari's Fortune.

In fact such 'combinations' do exist:¹³ Fortune was indeed often thought to meddle in love affairs and does or undoes the work of the God of Love; Venus sometimes takes over the function and emblems of Fortune. In the *Echecus Amoureux* Venus found herself turning the wheel of fortune.

Again we do not know for certain. But are we to know for certain? Do not the sphinxes on either side of the path near the entrance to the *Sacro Bosco* indicate that we are going to find an insoluble enigma? The group of the so-called Hercules and Cacus is a case in point, 8. Again no satisfactory explanation has been found; it does not conform to any known Hercules and Cacus groups, although the naked giant looks like Hercules; then there is the epigraph near it mentioning the Colossus of Rhodes; but obviously the group cannot be that either. The closest parallel can be found in illustrations to Ovid's *Metamorphoses*, of Polyphemus killing and tearing into pieces the companions of Odysseus, 9; but then the Cyclops should have only one eye, and in fact only has one eye in the illustrations to Ovid.¹⁴ Also in Ovid occurs a scene of Hercules throwing his adversary to the ground but holding him by one leg only. So what is it to be?

From the *Ovide Moralisé* comes probably the 'Mouth of Hell', 10, or

¹⁰ For further details and texts see: H. R. Patch, 'The Tradition of the Goddess Fortuna', *Smith College Studies in Modern Languages*, Vol. 3, No. 4, 1922, pp. 90 ff. I am greatly indebted to Mr. J. Trapp for drawing my attention to this book and pointing out to me the identification of Love and Fortune.

Perhaps it might just be mentioned in parenthesis that the dwelling of Fortune is sometimes described as a 'falling house' so it seems not impossible that this notion was responsible for Bomarzo's leaning house.

¹⁴ Ovid, *Met.*, Book XIV, ed. Venice, 1513, and Tusculani, 1526.

¹ For Bomarzo I see A.R. Sept., 1954.

² *Quaderni dell' Istituto di Storia dell' Architettura*, Rome, 1955, No. 7-8-9.

³ *Oxford Book of Italian Verse*, No. IV, p. 10 (from the *Rime Sparsi*).

⁴ 'Un' ipotesi sull' origine iconografica di alcune sculture della villa di Bomarzo' in *Giornale L.S.M.E.O.*, Rome, quoted in *Quaderni*, No. 7-8-9, and M. Praz, 'I mostri di Bomarzo', *Illustrazione Italiana*, 1953, p. 160 ff. (I have not been able to consult either magazine in London.)

⁵ The following observations are based on W. S. Heckscher 'Bernini's Elephant and Obelisk', *Art Bulletin*, Vol. 29, 1947.

⁶ A. E. Popham, 'The Dragon Fight' in *Leonardo, Saggi e Ricerche*, Rome, 1954, p. 225.

⁷ A. M. Hind, *Early Italian Engraving*, Vol. V, Part II, London, 1948, p. 87.

⁸ Hind, *op. cit.* Vol. I, 1, p. 214 (D.IV.5).

⁹ Pausanias VI, 25.1.

¹⁰ Plutarch, *Conjug. Praecept.* 32.

¹¹ *The Book of Fortune*, 200 unpublished Drawings by Jean Cousin, ed. L. Lalanne, Paris and London, 1883, pl. IX.

¹² Published in *Vite*, ed. Milanese, Vol. VIII, p. 32.

whatever that piece may represent.¹⁵ There is a representation of the open mouth of Hades and inside it Pluto with his feet on Cerberus and the Fates spinning as they were always depicted in the *Ovide Moralisé*, 11. Similar representations exist in mediaeval manuscripts. If we assume the mask to be the entrance to the Greek Hades the curious inscription round the entrance, paraphrasing Dante—'Lasciate ogni pensiero (instead of 'speranza') voi que entrate'—becomes clear: the Greeks departing from this world had to cross the river Lethe and drink the cup of forgetfulness; they left every thought behind.¹⁶ Through this mask one enters a cave such as was assumed to be the entrance to Hades and could be seen on Giulio Romano's fresco in the Palazzo del Tè. A table stands inside the cave with benches round it; some authors thought to enable banquets to be held there; however, if this cave is Pluto's then the table was intended to be used for a sacred banquet as had been done in Athens and had been described by Valerius Maximus¹⁷ and by Zosimus.¹⁸ The learned advisers of Vicino may well have been familiar with those texts even if they did not know the Greek inscription¹⁹ mentioning this custom.

sacro bosco

However, most peculiar, taken all in all, is the fact that this collection of strange beasts was meant as a

¹⁵ The *Ovide moralisé* is a mediaeval moralization of Ovid's *Metamorphoses*.

¹⁶ For a drawing by Borromini with the same wording over a similar entrance porch, purported to be a prison door and similar masks by Zuccari, see W. Koerte, 'Der Palazzo Zuccari in Rom,' *Römische Forschungen der Bibliotheca Hertriana*, Vol. XII, Leipzig, 1935, pl. 9 and p. 16.

¹⁷ II, 4, 5.

¹⁸ II, 1-4.

¹⁹ I.G. II 948-950.

preliminary to a Mausoleum dedicated to a loved one. It cannot be taken as an act of defiance or as a display of paganism in these years after the Council of Trent with Cardinal Madruzzo, one of its principal figures participating in the programme, nor simply as a joke. Should the *Sacro Bosco* represent the world, with sea monsters and water nymphs, with rivers and possibly the earth, full of strife and death or impending catastrophe (for instance the Tortoise rolling towards the abyss) and above and beyond all that, serenely the little tempietto, the mausoleum of a beloved wife? Some such idea may be behind the scheme. Perhaps one can come to a more precise conception of the underlying idea if one takes the texts into account which are distributed as inscriptions throughout the garden. As has been mentioned before, in one of them the gardens are called *Sacro Bosco*, the sacred grove.²⁰ In Antiquity in the Roman as well as the Greek orbit sacred groves dedicated to a god or goddess abounded and many ancient writers mentioned and described them; Virgil in the *Aeneid*²¹ and in the *Georgics*,²² Ovid in the *Metamorphoses*,²³ and *Amores*²⁴ and in the *Fasti*;²⁵ both poets were widely read during the Renaissance. Moreover we have seen that illustrated editions of the *Metamorphoses* had provided patterns for some of the sculptures. Homer too gives a description of a grove sacred to Athene on the outskirts of the town of the Phoenicians in book VI of the *Odyssey*. Furthermore the

placing of the Ara pacis, for instance, and of other altars on rising terraces bordered by balustrades, connected by flights of steps, may also have been known; the reconstruction of the temple of Fortune on the slope of Praeneste had occupied many a Renaissance architect;²⁶ and certainly Suetonius was being read in sixteenth century Italy with his descriptions of the Mausoleum of Augustus. This structure Augustus built in his sixth 'Consulship' between the Via Flaminia and the bank of the Tiber; at the same time he opened to the public the groves and walks by which it was surrounded.²⁷

The description of it and the surrounding parts of Rome by Strabo is even more telling.²⁸

In fact, Pompey, the Deified Caesar, Augustus, his sons and friends, and wife and sister, have outdone all others in their zeal for buildings and in the expense incurred. The Campus Martius contains most of these. . . . Indeed, the size of the Campus is remarkable, the works of art situated around the Campus Martius, and the ground, which is covered with grass throughout the year, and the crowns of those hills that are above the river and extend as far as its bed, which present to the eye the appearance of a stage-painting—all this, I say, affords a spectacle that one can hardly draw away from. And near this campus is still another campus, with colonnades round about it in very great numbers, and sacred precincts, and three theatres, and an amphitheatre, and very costly temples, in close succession to one another. . . . in the belief that this place was holiest of all, the Romans have erected in it the tombs of their

most illustrious men and women. The most noteworthy is what is called the Mausoleum, a great mound near the river on a lofty foundation of white marble, thickly covered with ever-green trees to the very summit. Now on top is a bronze image of Augustus Caesar; beneath the mound are the tombs of himself and his kinsmen and intimates; behind the mound is a large sacred precinct with wonderful promenades; and in the centre of the Campus is the wall (this too of white marble) round his crematorium; the wall is surrounded by a circular iron fence and the space within the wall is planted with black poplars. And again, if, on passing to the old Forum, you saw one forum after another ranged along the old one, and basilicas, and temples, and saw also the Capitolium and the works of art there and those of the Palatium and Livia's Promenade, you would easily become oblivious to everything else outside. Such is Rome.

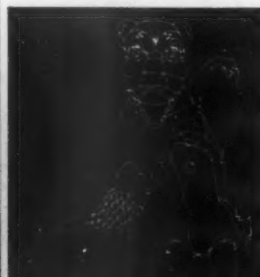
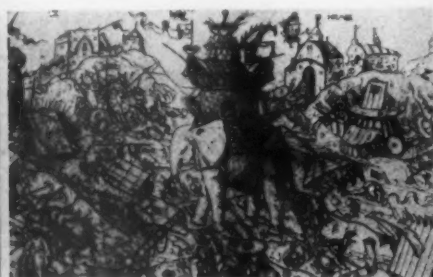
This description might well have inspired Vicino Orsini. In Christian times the connection between Death and Nature had been established by Petrarch, whom we have had occasion to mention before. In his old age when he thought death was near, the poet retired to the Euganean mountains, there built himself an abode in the midst of olives and vine and waited for the end to come.²⁹ But how do the monsters fit in? Are they simply the equivalent of the sculpture mentioned by Suetonius or do they have any symbolic or other value in themselves? Certainly the Cerberus guarding the ascent to the Mausoleum fits in well with the scheme of things and so does Pluto's Cave particularly since Ovid

²⁶ e.g. Palladio and Ligorio.

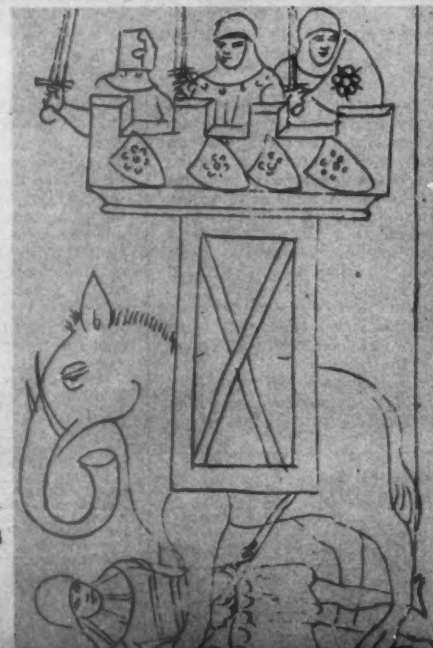
²⁷ Augustus, C.

²⁸ 2, 3, 8.

²⁹ A. Chastel, 'Les Jardins Humanistes,' *La Revue des Voyages*, no. 13, Paris, 1954, p. 14.



The Elephant with a Castle on his back, 2, has a venerable ancestry in European art. This one is of a special kind: he carries a Roman soldier in his trunk. The representation is of the sacrifice of Eleazar in the Book of the Maccabees, as shown, 4, in the mediaeval *Speculum humane salvationis* (1524, MS Munich clm. 146) and later by H. Boeck (3, engraved by A. Duhamel) in his 'Besieged Elephant.'



5, the group of the dragon fighting a lion and lioness derives ultimately from a lost Leonardo drawing; the mirrored version, 6, is by Lucantonio degli Uberti. Its meaning was possibly political, referring to a feud. The woman on the tortoise, 7, may be a Fortune or a Venus, or both.

speaks of a Stygian sacred grove³⁰
 "... per flumine iuro
 infera sub terras Stygio labentio lupo!"
 The Elephant and Castle with the death of Eleazar was thought to be, as has been mentioned, a prefiguration of Christ's supreme sacrifice. Was this motif introduced as an example that pre-Christian events have some connection with Christian beliefs and happenings? Was it simply thought suitable to have also an image belonging to the biblical world; perhaps, since there is again a parallel in Soriano?

Or was the elephant only introduced, without any ulterior motif as one of the *meraviglie* of the world, one of the 'sette moli' which one could observe in Bomarzo? Altogether this mixture of the idea of the Seven Wonders of the World with a Sacred Grove is somewhat peculiar. But, then, the monsters were in the tradition of the Gardens of the Renaissance. The Villa d'Este at Tivoli, Ligorio's and Caro's work, abounded with strange animals and even the City of Rome was rebuilt in miniature in one corner of the gardens, and, before then, Giovanni Rucellai's gardens at Florence had giants, centaurs, vases, heraldic lions, harpies, philosophers, even popes, cut out in topiary work.³¹

Were, then, the monsters only there as oddities, or as some more

³⁰ Met. I, 189. By the infernal streams that glide beneath the earth through Stygian groves, I swear...

³¹ G. Marcotti, *Un Mercante Fiorentino e la sua famiglia*, Florence, 1881, pp. 75 f.; Vedesi da via le infrascritte cose. Gran numero di belli boschi di variate maniere: cioè tondi, a palchi, navi, galee, templi, pile e piloni, vasi, uretoli, uno doppio, cioè che mostra da ogni parte giongante, nonini, donne, marzocchini, con bandiere del comune, bertucce, dragoni, centauri, camelli, diamanti, spiritelli colli' arco, coppe, cavalli, asini, boui, cani, cerbi, et un orso e un porco selvatico e delfini, giostranti, balestrieri, un' arpia, filosofi, papi, cardinali, e più altri simili cose.

'quotations' from the ancients; the dragon who according to Pliny fights the elephant, would be an instance.³² Yet another epigraph may help us, however, in our search for Bomarzo's *raison d'être*:

Cedan et Memphi e ogni altra meraviglia
 Ch'ebbe già l' monstro in pregio al sacro bosco

Bomarzo is not to resemble any other garden ever: this memorial to a wife is to be unique.

the sphere

Love for his deceased wife may have been expressed by yet another strange object, a large sphere covered with flowers and many ornaments, topped by a castle.³³ Nothing even approximately similar seems to exist anywhere else, at least not in three dimensions. The only parallel I could find are maps of the world on which in addition to the countries or continents also the walled and gated paradise finds its place, 13. Such maps were frequent in the fifteenth century but no longer in the sixteenth. More correct representations of the globe existed then already but would have been less useful for the purpose in hand. But what can have been the purpose? The sphere or globe figured quite prominently in the curious world of Renaissance emblems. Prominently enough anyhow to incur Rabelais's scorn who said of the Italians³⁴ 'if they want to represent Hope they represent a sphere.' This idea goes back to an *impresa amorosa*,³⁵ a fifteenth century en-

graving representing Lorenzo de' Medici handing his beloved Lucrezia Donati a 'sfero', a sphere meaning 'spero,' I hope, that means hope for love (see p. 427). Vicino Orsini could not hope for love in this world, he hopes for love in the next, when he will meet his wife again in Paradise. Unless the castle represents a castle of love, to make doubly sure of the meaning of the conceit. Unfortunately the date of Giulia Orsini's death is not known, and the only date we have is that on a letter by Annibale Caro of 1564 in which he approves the programme of the 'teatri e mausolei'.³⁶

Bomarzo is also different from all contemporary gardens because its monsters were carved on the spot out of the living rock and thus follow no other order than that of the occurrence of suitable bits of such rocks, and because of the layout of the terraces; the steps leading from one to the other, the paths threading through the gardens are arranged so as to fit in with the lay of the land 'Non viris locis sed loca viris honestantur.'

In short the *genius loci* reigns; we will find him again in Soriano.

Who invented the scheme, if there was one, or who found the ideas for the single groups and figures? Vicino Orsini was in touch with scholars like Caro; but as far as one can see none of the 'professionals' were involved. Did Vicino devise it all

³⁶ Caro, *Lettere familiari* II, Padua, 1734, No. 230, 20 Oct., 1564. La lettera m'ha trovato in Frascati tanto occupato intorno a' viali, e simili novelle della mia vignetta, quanto forse non è V.S. intorno a' Teatri, e Mausolei del suo Bomarzo... (on painting the fresco) e non ognuno è atto a farla, Taddeo sarebbe molto a proposito, se vuole, o se può. Caro's reference to 'teatri' is interesting in the light of the quotation from Strabo (cf. p. 428), cf. also Caro *op. cit.* II, no. 232, al Sig. Vicino Orsini... e forse, non meno ch'ella si sia nelle sue meraviglie di Bomarzo.

himself or who helped him? The dedication on the 'leaning house' to Cristoforo Madruzzo provides a clue; his name as an adviser has been put forward before, and he seems indeed a likely person, particularly if one takes into consideration what he had done a few years earlier at his villa in Soriano nel Cimino.

Soriano

Soriano is still entirely unknown and until the *Quaderni* published a couple of epigraphs with dates the villa and its nymphaeum, 14, were utterly undatable.³⁷ We know now that Soriano came into the Cardinal's possession in 1561 and that he began at once to build a one-storied long-stretched villa with a nymphaeum at one end, and at the other a loggia with a stupendous view comparable only to that from Caprarola. The villa is of no particular interest apart from its position half-way up an extremely steep slope. In the eighteenth century another floor was added imitating the style of the earlier part, thus increasing the confusion of its architectural history.³⁸ It is the sculpture of the so-called nymphaeum which is of interest to us and helps to explain the gardens of Bomarzo. Nymphaea were quite common features by then, the first having been built by Bramante in the Vatican; others followed, e.g. in the Villa Madama, in the Orti Farnesiani, and in the Villa d'Este.³⁹

³⁷ *Quaderni cit.* p. 24.

³⁸ Marchese Giovanni Incisa della Rocchetta has very kindly helped me to disentangle the confusion of the building history: on Soriano further Mario Zucca 'Sistemazioni urbanistiche del Rinascimento nel Lazio', *Paladio* VII, 1943, p. 45, and A. Feruzzi, *Soriano nel Cimino*.

P. Egidi, 'Soriano nel Cimino', *Arch. Soc. Rom. St. Patria*, Vol. XXVI, p. 381.

³⁹ On the Madruzzo of Trento cf. P. Litta, *Celebri famiglie italiane*.

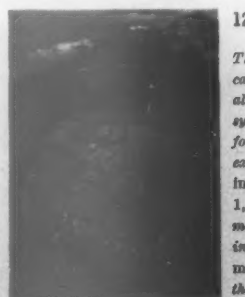
⁴⁰ James S. Ackerman, The Belvedere as a Classical Villa, *J. of the Warburg & Courtauld Inst.*, XIV, 1951.



8
 The so-called Hercules and Cacus group, 8, represents Polyphemus killing one of Odysseus' companions, as illustrated in Ovid's *Metamorphoses* (Venice, 1513), 9.



10
 The mouth of Hell, 10, is echoed by the mouth of Hades, and the cave of Pluto, 11, in an Ovide Moralié (Bruges, 1484).



12
 The sphere topped by a castle, 12, is unique in all the arts. It may symbolize Vicino's hope for requited love, as expressed in the *Impresa amorosa* (see 1, page 427); the castle may symbolize Paradise, in the manner of a *mapa mundi*, e.g., that of H. Rust, 13.

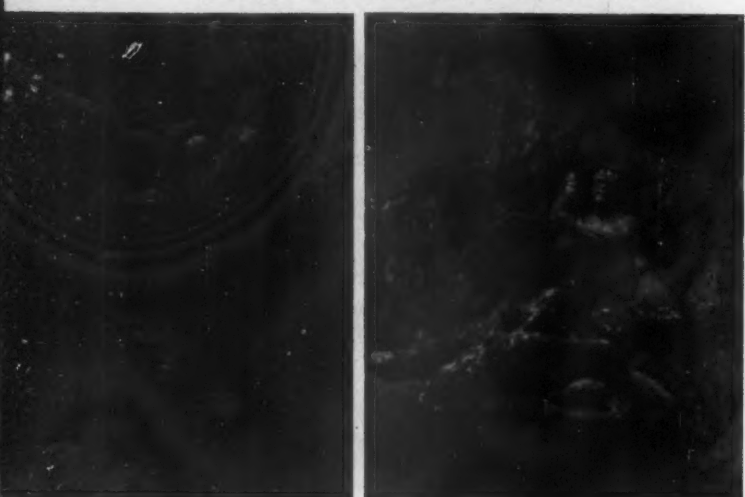




14 **Soriano** is a close neighbour of Bomarzo: the 'Nymphaeum,' 14, of the Villa Chigi-Albani built by Cardinal Madruzzo, a friend of Vicino Orsini, is dedicated to the *genius loci*



16 and to the source *Papaqua* springing from the rock above: on the left, 15, 17, is *Moses striking the Rock*; the background, 16, 18, is filled by a satyr family, a faun, a shepherd and various animals all cut out of the rock representing the forces of nature of ancient Roman



17 belief. In niches on either side stand statues of the gods and goddesses of plenty, 20, 21. These and their position at the foot of the rock remind us of Cicero's *aedicula bonae deae* sub saxo at the foot of the Aventine hill in Rome.



Soriano's is of a different kind: it is dedicated to the *genius loci*.⁴⁰

'Quod felix faustumque sit. Pio IV Pont. Max. Surlatinorum Marchionatus, cui Gallesium et Bassianum subditur, institutori, Madrutiorum propinquo CRISTOPHORUS MADRUT. CAR., Marchiae Legatus, Tridenti Brixinaeque Episcopus, Princeps German. Italus, postquam sub divo Carulo V obiit, cum in Alemania, tum in Italia, diversa munera publica, et sub Philippo filio Insuress rexit, Ludovico Madrutio Car. nepoti eorum rerum tradidit, celebrem arcem hanc jam vetustam instauravit. Ecclesiaeque libertati aequae ac Madrutis patere iussit, quin etiam vivos gelidi fontis Papaquae lacus suo otio atque negotio, musis, genio loci, studiorum secessui exornavit MDLXI.' It is also different in shape, arrangement and contents. The background is carved out of the living rock, which is transformed into a landscape with trees, beasts of many sorts, also water animals and a family of satyrs, the half figure of Pan and a shepherd, 16, 18. Next to this Greek Idyll is a biblical scene connected with water: Moses striking the rock; this scene is given in high relief in an architectural setting and is thus different in every way from its neighbour and follows a more traditional pattern, 15, 17. On either side of this are statues of female figures with putti and children, holding a cornucopia, 20, and opposite it male figures also with putti and one again with a cornucopia, 21. The female figures can be identified as Abundantia, or Ops, or Maja or Bona Dea;⁴¹ but identification of the male figures presents some difficulties. The Bonus Eventus carries a cornucopia; but he should hold a bowl in one hand and the putti are quite out of place. It is, of course, not impossible that something has gone wrong or that the usual iconographical idea has been deliberately altered, to create a desired symmetry.

On the other hand it is quite possible, particularly if we remember the inscription referring to the *genius loci* that here is a representation of a genius, which according to Cartari could be represented holding a cornucopia.⁴²

'Ne sa egli però se sia il Genio del luoco, e che altro sia, e per questo vogliono alcuni che si faccia il Genio in forma di serpente. Altri lo fanno in forma di fanciullo, altri di giovane, altri di vecchio, come Cebete nella sua tavola. . . Et in altre medaglie pure di Ariadno e la imagine di un' huomo di guerra con veste intorno avalta giu infino e mezza gamba, che nella destra tiene un vaso a modo di chi sacrifica, et ha il corno della copia nella sinistra.'

Furthermore there existed representations of genii with putti or with an Amor cum putto on ancient reliefs⁴³ and one such may have been known to the designer of Soriano.

There are then three different schemes; the biblical scene of Moses, the abbreviated landscape with trees and rocks enlivened by all sorts of beasts and peopled by a satyr family with a half figure of Pan or a Faun on the extreme left holding a curious object, possibly a wine sack, above his

head; above him is seated a shepherd. Then there are the statues connected somehow with the gods and goddesses of plenty. A curious mixture, which does not seem to make sense. Moreover, one would expect a fountain to be decorated by a nymph, not by a family of satyrs. But then the inventor of the scheme might have thought of Ovid's definition:⁴⁴

sunt mihi semidei, sunt, rustica numina, nymphae faunisque satyrique et monticolae silvani;

These lines might well have given the cue to the whole scene, the shepherd being a 'monticola silvanus' then a faun and the satyrs. But the most telling passage comes from Cicero, *De domo*: 'Aram et aediculam et pulvinar sub Saxo dedicasset.'⁴⁵ and from Ovid's *Fasti*.⁴⁶ This, then, seems the obvious answer as to why a temple dedicated to the Bona Dea underneath or immediately adjoining the rock was introduced into Soriano. The 'backcloth' of the scene was perhaps in honour of the *genius loci*—a representation of the forces of Nature, according to the ancients, the 'rustica numina' of Ovid. Aesthetically these figures have little merit and were they not cut out of the rock, they would have little claim to attention or renown; but, as it is, these rock-cut figures were probably the example for the Bomarzo figures also cut out of the rock.

This was also the first fountain to use rock scenery, a feature so widely used in seventeenth and eighteenth century fountains from Bernini to the Fontana di Trevi. Another link with Bomarzo is the curious mixture of iconographical themes, the mixture of the pagan and the biblical as well as the fact that the scenes portrayed are extremely rare. Satyr families and female satyrs, in particular, appear very seldom, though they do exist.⁴⁷ And Moses striking the Rock is equally rare in sculpture.⁴⁸ A reconstruction of the Aedes Bonae Deae is unique. Soriano's iconography then is as far-fetched as Bomarzo's; most important of all, Soriano's dependence on ancient sources makes our interpretation of Bomarzo as a memorial garden as described by Strabo more certain.

Although Soriano too—like Bomarzo—has been attributed to Vignola, the architect of the Palazzo Farnese at Caprarola, there exists really no likeness to Caprarola nor to Soriano's other close neighbour, the Villa Lante.

The only sculpture to which Soriano and Bomarzo is akin in any way is, I think, Giovanni da Bologna's figure of the Apennine at Pratolino and a few features in the Giardini Boboli. This, like the garden of Giovanni Rucellai mentioned before, as well as Vasari's Fortune and the Tortoise, leads us away from Rome to Florence. So does finally another feature, the animals at the back of the satyr family climbing up the rocks. Still, this similarity is iconographical rather than stylistic and so does not help towards an attribution to an artist or a known school.

⁴⁰ Quoted from *Quaderni* cit. p. 24.
⁴¹ Cf. G. Wissowa, *Religi. und Kultur der Römer* 2nd ed., Munich, 1912, p. 423, who also mentions that this goddess appears in the books of the pontiffs under the titles Maia, Fauna, Ops and Fatua.
⁴² C. Cartari, *Le Imagini de I Dei de Glantichi*, Venice, 1556, f. 89v. This edition is not illustrated but in later illustrated editions geni are shown partly clothed without wings holding a cornucopia, thus not really agreeing with the classical genius given in the nude with wings.
⁴³ E. Rink, *Die bildlichen Darstellungen des römischen Genius*, Gießen, 1933, pp. 36, 55.

⁴⁴ *Met.* I, 193; I have demigods, rustic divinities, nymphs, fauns and satyrs, and sylvan deities upon the mountain slopes.
⁴⁵ *V.* 136. He dedicated the altar and temple and the sacred couch at the bottom of the rock.
⁴⁶ *V.* 148.
⁴⁷ Woman Satyr and bust of Pan, by H. S. Beham after Marc Anton (B. XIV, 249), Bachmann (ditto), Eneo Vico, (B. XV, 298, 33 B. XIV, 284). Satyr and Satyress, by A. Riccio in V.A.M.: *N.A.C.F. Annual Report*, 1950, ditto by Lucini in Brera (Anderson 12712).
⁴⁸ Michelangelo had planned a fountain with a Moses for the Vatican but eventually the niche was given to the statue of Ariadne. Michelangelo's design has not survived.

Georgina Masson

OLIVETTI

THE CREATION OF A HOUSE STYLE

The first thing that strikes the layman on a tour of the Olivetti works at Ivrea is that everyone, whether he be workman, designer, or business executive, refers to everything as 'ours'—'we have our own carpenter's shops' . . . 'we are going to have a new canteen'—the firm or Olivetti are never mentioned. This unconscious sense of participation in the activities of the vast organization for which they work, is perhaps the best illustration of the moving spirit which has animated the Olivetti company since its inception and which is the particular interest of Adriano Olivetti who is now its president.

The success in the business world, and the expansion of what in 1915 was a small family business with 125 workers, into an international concern now employing over 16,000 people, is plainly not the only, or even perhaps the primary, interest of Adriano Olivetti; as is demonstrated by the theories which he has expounded in two books—*L'Ordine Politico della Comunità* and *Società Stato Comunità* which he has written since the last war. In these two works he has outlined his plan for a federated state built up of communities which are designed to fit the social, political, and aesthetic needs of man, as opposed to the colossus of the modern state, with its vast inhuman industries and shapeless urban centres which ignore human needs, aspirations and happiness.

A sense of social responsibility for the material well-being of their employees has characterized many pioneers of industry, particularly in northern countries, but when

* Camillo Olivetti, whose portrait appears in 1, was born at Ivrea in 1868, took a degree in engineering at Turin and founded the type-writer factory at Ivrea in 1908.

Camillo Olivetti first founded the Olivetti company in 1908 he was far in advance of his Italian contemporaries in this sphere, and even when the nucleus of his small company was growing into a large industry, he set aside an hour a day during which any worker in the factory could come and see him to discuss his personal problems and ask for assistance. Inevitably this personal contact was lost in the rapid expansion of the Olivetti concerns, but with time it was translated into the comprehensive social services which now provide health services, a convalescent home, kindergarten, children's holiday camps, scholarships, and emergency loans, free of interest, for the Olivetti employees.

It was natural that having grown up in this mental atmosphere, Adriano Olivetti should also be imbued with his father's sense of social service and responsibility for the material welfare of the firm's employees; but his own personal concept of life has led him to expand them to the far wider field of aesthetic, and indeed spiritual, ideas, which in his philosophy must inevitably form an integral part of human life if it is to be lived satisfactorily and fully.

In its practical application, this point of view has been translated into concrete terms not only in the factory buildings and housing estates of the Olivetti works, but has been extended to the design of all Olivetti products, the shops in which they are sold, and commercial publicity and advertising. In all of these aesthetic considerations have received as much attention as technical efficiency because Signor Olivetti believes that they are no less important; with the result that to the world in general the name of this one firm has come to be associated with all that is best in contemporary commercial design and architecture.

Obviously these varied aspects of the activities of a large commercial concern are the work of many individual outstanding designers and architects, but the policy which has led to their employment—instead of being content with the second best and the banal—is the direct outcome of Signor Olivetti's conviction that aesthetic values are one of the basic necessities for human well-being, especially in the world today.

It is a sad commentary upon our epoch to have to admit that it is surprising to find that a leading European industrialist entertains such views, but it is equally refreshing to reflect that far from having impaired the development of an industry, they have been largely instrumental in its expansion. By becoming an object lesson in the employment of contemporary style, Olivetti's have created for themselves a distinctive trade mark, whose influence upon the publicity and sales of their products can hardly be overestimated.

To put it crudely, Signor Olivetti has proved that good contemporary design is as sound a commercial proposition as the adoption of the most advanced technical and business methods, of which he has also always been the exponent. But what is of particular interest is the basic idea which has led him to put into practice a theory which, if it had not been proved so successful, might well have been poo-pooed as unpractical and unsuited to modern commercial life.

Basically, Signor Olivetti might be termed a modern humanist. It is evident from his writings upon his plan for a state built up of a federation of com-

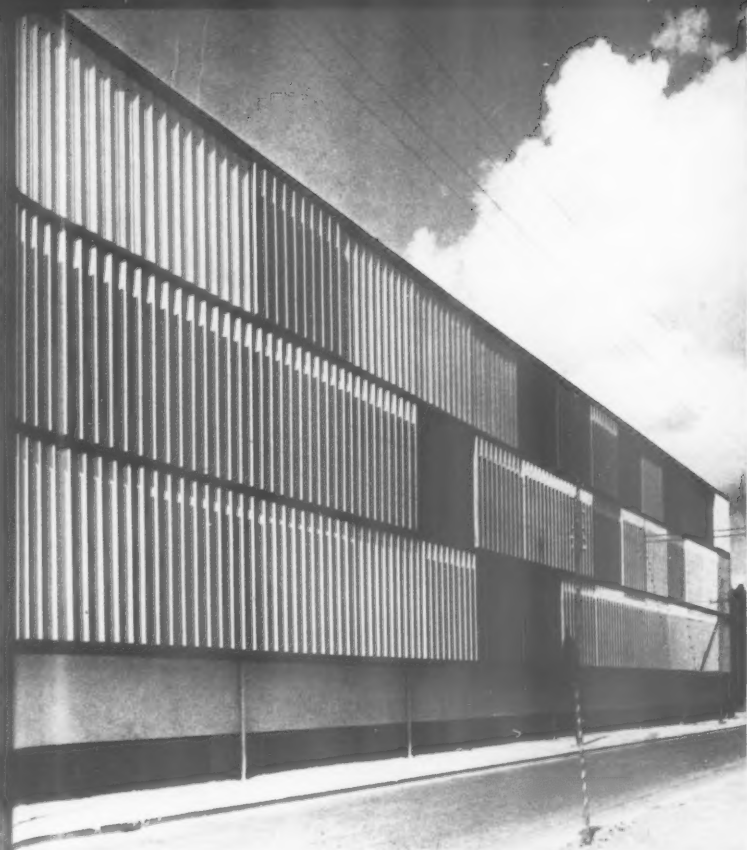
munities, that he is primarily concerned with the needs of man, his aspirations, and his hope of happiness. This last he believes can only be achieved by creating a world that is designed for man, based upon tightly knit communities, welded together by common interests, and small enough to encourage the development of human relations. For him the present crisis is due to the fact that man is a misfit in the modern world, which has now become a kind of Frankenstein monster that its creator is no longer able to control in order to fulfil the basic needs of human society.

As an Italian Signor Olivetti has naturally founded his conception of the community state upon what he considers to be the primary requirements for the reorganization of his own country along these lines. He is evidently an admirer of many Anglo-Saxon institutions, also of English and American efforts to create community centres and the physical basis for human relations in the new satellite towns and in rural districts—amenities, as Kidder Smith pointed out in 'Italy Builds,'* that are so sadly lacking in the mushroom growths with which post-war speculative building has surrounded so many Italian cities.

In Signor Olivetti's view the ideal community should number something between seventy and a hundred and fifty thousand souls. In rural areas its physical extent could be dictated by the traditional geographical boundaries of a diocese, a district, or an electoral college, that have their origins in a community of interests which have been built up during the centuries, or are founded upon some natural features that in themselves constitute the boundaries of a definite region.

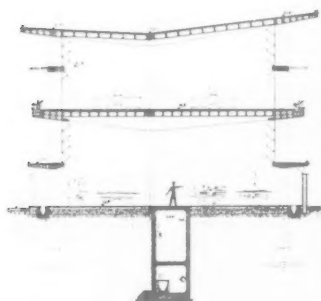
In industrial districts the community would naturally be centred upon the industries, great or small, that provide the population with their means of livelihood. The vast size and lack of coherent planning of modern cities has rendered them incapable of providing a harmonious or satisfying life for the people which inhabit them, and Signor Olivetti advocates their transformation into a series of communities, each with its own institutions and system of local government, on the same model as the rural communities.

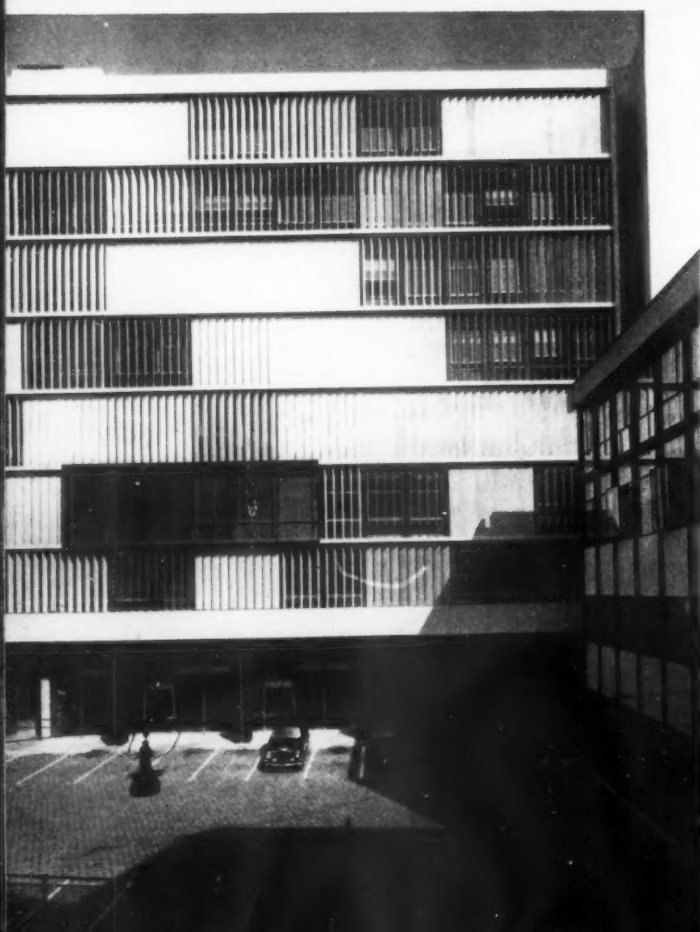
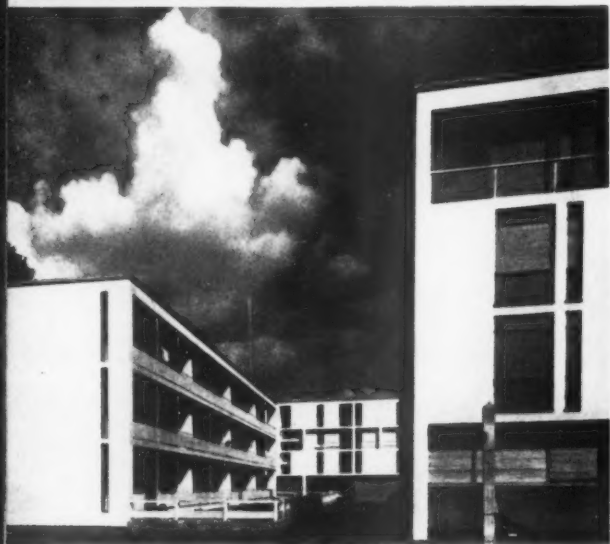
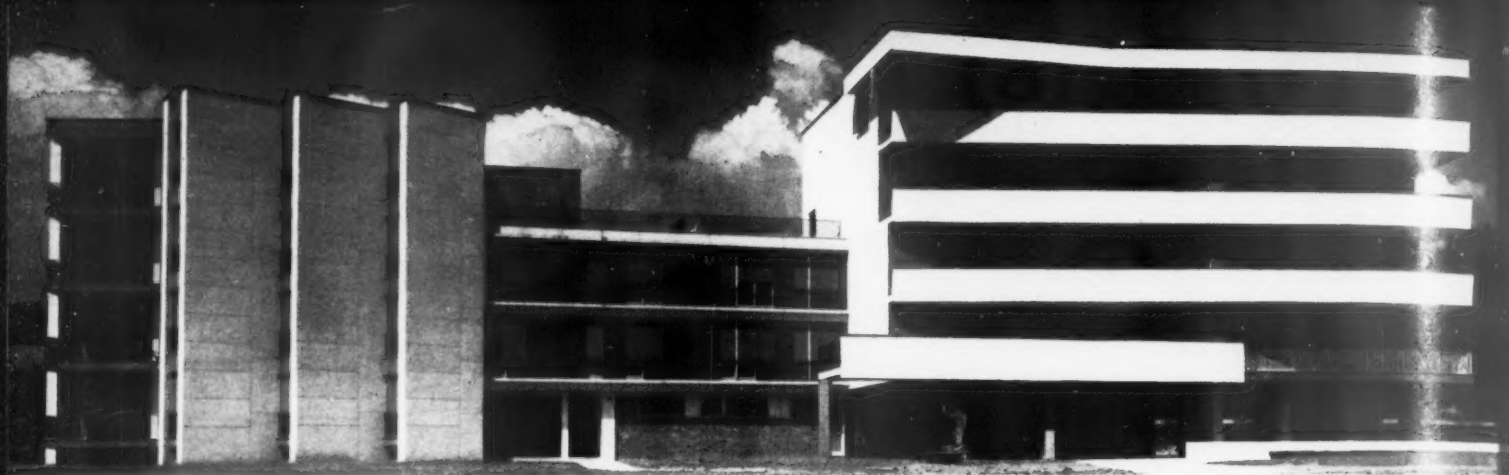
* Published by the Architectural Press, 1955, at 56s.



Olivetti as patron of enlightened industrial architecture; 2, recent extensions to plant at Ivrea, by Cascio and Fiocchi; 3, the main factory building, by Figini and Pollini; 4, the new machine tools shop at Ivrea by Eduardo Vittoria. 5, 6, 7, 8, are a section and views of the new factory designed by Luigi Cosenza at Pozzuoli, outside Naples, an Olivetti venture in the economic rehabilitation of southern Italy.

2	3
5	4
7	6
	8





Olivetti buildings that cover a multitude of uses, but all exhibit an equally high standard of design, outside the field of industrial structures, include workers housing at Ivrea, 9 and 10, by Figini and Pollini; the research station for the Ivrea factory, by Eduardo Vittoria, 11; the brilliant new office block in Milan, 12, by Bernasconi, Fiocchi and Nizzoli; employees' summer camp at Marina di Massa, 13, by Cascio and Fiocchi; convalescent home, 14, at Burolo by A. Fiocchi; and an entirely non-commercial building, the Comunità centre at Palazzo Canavese, 15, by

	9	
10	11	
12	13	14
	15	



A country which is organized as a federation of such communities would, in Signor Olivetti's opinion, be designed to provide a human basis for life founded upon human contacts and a community of interests, as opposed to the vast inhuman and impersonal scale of the modern state. From this it will be clearly seen that in his preoccupation with the needs of man, Signor Olivetti sees life very much in the round and as a corporate whole. Freedom from financial strain, based upon a good living wage and the provision of social services—the aims in fact of the welfare state—do not seem to him to be sufficient guarantee for the basic requirements that go towards producing human happiness. To him the aesthetic, and in fact the spiritual, needs of man are equally important constituents of the whole, and it is this insistence upon the need for beauty as well as material well-being that seems to distinguish him from many other social reformers. The validity of his theories have been proved in the hard test of commercial competition by the success of the Olivetti products which have been designed with this end in view. It is interesting to note in this connection that a modern American author, in writing of the Olivetti products, has quoted Schiller's contention that aesthetic conditions are of greater importance to a moral life than physical ones.

On his own admission, Signor Olivetti has arrived at these conclusions through a long process of evolution of his original ideas—as a young man he was primarily interested in socialist, and even Marxist, theories. In his youth he saw the failure of the socialist movement in Italy and the birth of Fascism before he went to America, in 1925, as a young man of twenty-four, to study modern systems of production and organization. As a result of his experiences in the United States, the family business was completely reorganized and expanded from a small firm that made four thousand typewriters in 1924, to thirteen thousand in 1929, and which today produces three hundred and fifty thousand office machines annually.

During the years which have seen this great expansion of the industry that he directs, Signor Olivetti watched his country pass through the crises of the fall of Fascism, the Italian armistice, the German occupation, the struggle of the resistance movement, and the chaotic aftermath of the immediate post-war years, and inevitably they have left their mark upon him. Although he is still deeply interested in socialism, his personal philosophy has also now a definitely religious and Christian basis. In his book *L'Ordine Politico della Comunità*, which was published in 1945, he wrote—'without a renewed moral education founded upon the Gospel, all political change will be insufficient, and the most profound causes of the world catastrophe—the propaganda of hate, and discords, will not be extinguished'—but it is the spirit which animates Christian teaching, not its dogma, or even necessarily its creed, that he considers to be of primary importance.

These, then, are the basic ideas which Signor Olivetti has gradually evolved over a period of some thirty years; they have been influenced by the atmosphere in which he grew up, by his own personal experience as the head of a rapidly expanding commercial concern, and his reactions to the period of

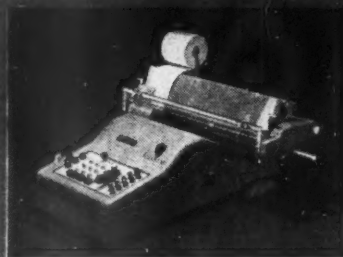
stress and strain through which men of his generation have lived. Their evolution has been gradual, and already in the early 'thirties it was evident that he felt that the successful direction of a large commercial concern carried with it responsibilities far wider than those which are normally associated with such a function. The provision of social services and good living conditions for the Olivetti employees led him to take an interest in town and country planning—an idea which was then in its infancy in Italy—and his participation in, and ultimate direction of, the 1937 Valle d'Aosta Plan, the first of its kind in Italy, was the immediate result.

The study of town and country planning inevitably brought in its train an interest in architecture; and when, in 1938, the Olivetti works at Ivrea had to be enlarged, Signor Olivetti commissioned two outstanding young Milanese architects to prepare the designs—the result was Figini and Pollini's remarkable glass-fronted structure, 3, which even after the passage of nearly twenty years can still be accounted an outstanding innovation in industrial architecture.

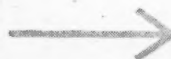
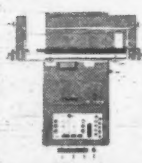
With his conception of life as a corporate whole in which aesthetic principles play as important a part in man's well-being as provision for his material needs, it was inevitable that Signor Olivetti should lay much stress upon the design of the machines which are produced in the company's factories, and all their concomitants of sales organization and publicity. His father before him had insisted upon the importance of good design in the manufacture of typewriters, and in the early 'thirties Signor Olivetti had already commissioned Aldo Magnelli to design the new portable typewriter which the firm was then beginning to manufacture. Under his direction, as far back as 1928, the Olivetti publicity service had already broken new ground by its conception that publicity material should be in tune with contemporary currents in art and architecture, and not simply pander to preconceived ideas of what would appeal to the popular taste. Foreign artists such as Savignac, Henrion, Herbert Bayer, Paul Rand, and Xanti Schavinsky were commissioned at different times to prepare designs for the publicity organization. Out of these beginnings there grew up the new conception of a long term publicity which informs and creates in the public a taste and a demand for products which conform to the highest standards of contemporary design.

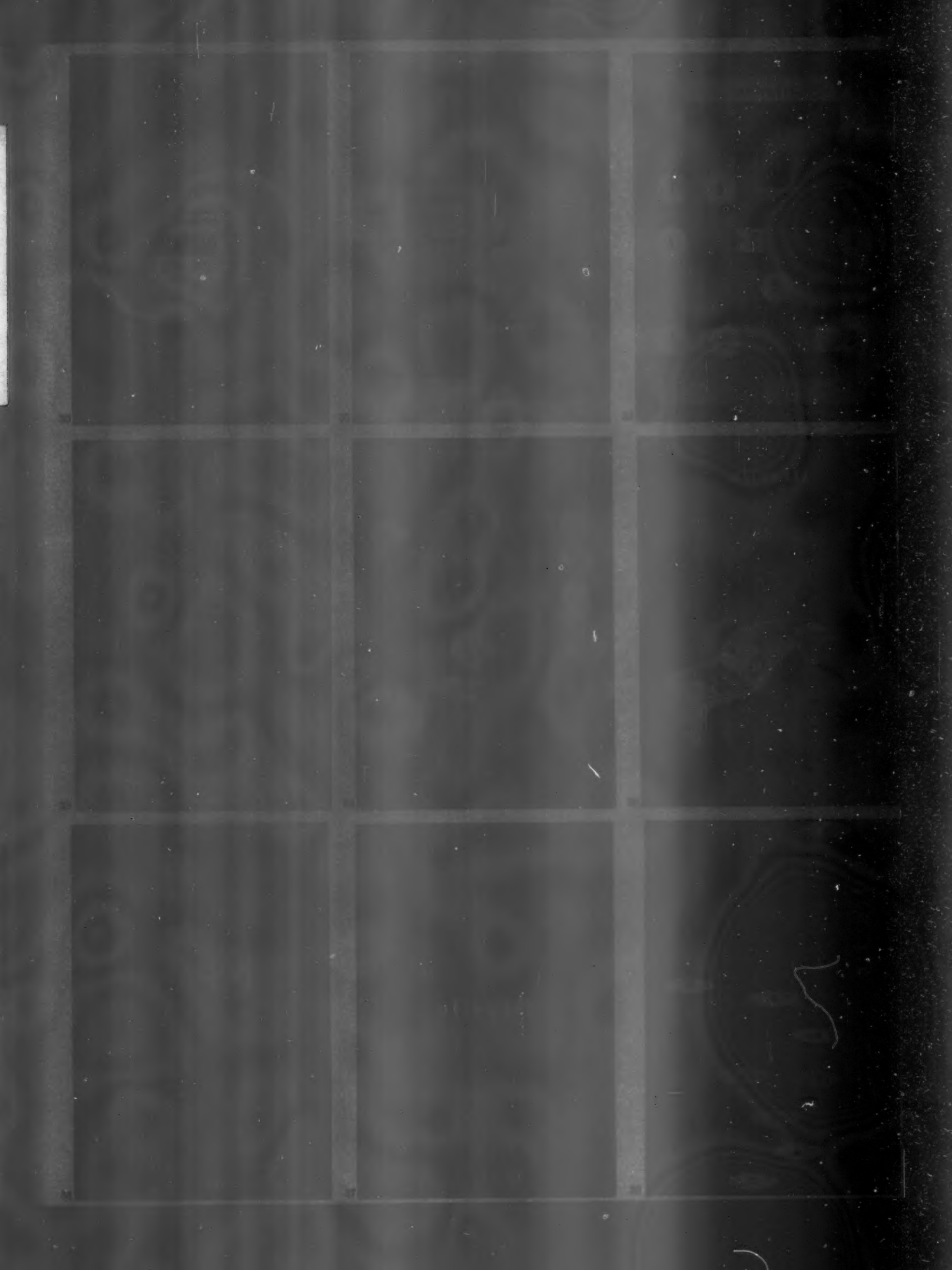
By the outstanding commercial success of this policy Signor Olivetti has proved that the specious reasons which are so often advanced to excuse low standards in commercial design and publicity, on the grounds that they coincide with what is believed to be the popular taste and are therefore what the film trade would term 'box office,' are in fact fallacious. By his refusal to accept such debased standards and his courage in applying his philosophy of life to commercial and business practice he has achieved not only a great measure of material success for the industry which he directs, but has made it an object lesson in contemporary style.

If in general terms his philosophy of life has had a profound influence upon Signor Olivetti's activities, there can be little doubt that in particular his participation in the 1937 Valle d'Aosta Plan has had a

**Olivetti Divisumma CR**

Statistically significant difference with columnia carrier.

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practical influence upon his personal interest and taste in architectural style. During those early years he was brought into contact with many of the outstanding members of Italy's rising generation of architects, like Figini and Pollini, and it has been the employment of men such as these that has been largely responsible for what is recognized as the Olivetti style.

There exists a general planning committee which is responsible for the Olivetti concerns' policy in these matters, but, owing to Signor Olivetti's personal interest and experience in this field, his opinion naturally bears great weight in the final decisions taken. When asked to explain the visual consistency attained by the most diverse aspects of the activities of the Olivetti concerns—the guiding policy which appears to weld factory buildings, workers' housing, shops, publicity material, and the design of the Olivetti machines themselves into one comprehensive whole—and his personal influence upon it, Signor Olivetti modestly maintains that by requiring a high standard of design in objects, no matter how diverse in character, one automatically achieves an impression of unity and harmony.

In actual fact, however, there is little doubt that Signor Olivetti's influence has contributed a great deal to the general artistic direction of his firm's policy; he sees personally all designs—whether for large buildings, or even for small details like publicity booklets, 30-38, and the choice even of a particular colour for one of the latter may well be his own. If much of the discerning taste which is evident in the artistic direction of the Olivetti concerns is to be ascribed to Signor Olivetti and his advisers, the high standard of its execution must be attributed to the architects and designers whom they employ. Signor Olivetti would probably, with habitual modesty, deny that his personal knowledge has led to the felicitous selection of the individual men for each specific job, but there is little doubt that this has been so.

As a result many of the most outstanding names in Italian contemporary architecture have figured upon the list of those who have been employed in the design of Olivetti buildings during the last ten years. Apart from Figini and Pollini, who have already been mentioned, G. A. Bernasconi was, with A. Fiocchi and M. Nizzoli, responsible for the design of the new Olivetti office building in Milan, 12, he also designed the Olivetti shop at Vogera, and, in association with B. Coda, the one in Milan. E. Bonfante has also designed Olivetti shops, notably the one at St. Gallen in Switzerland. O. Cascio, in association with Fiocchi, designed the children's holiday camp at Marino di Massa, 13, also the extension of the aluminium foundry at Ivrea, 2. L. Cosenza was the architect of the new Olivetti plant at Pozzuoli near Naples and the workers' housing attached to it 5-8, (he had already done some excellent work in this field in the Naples area before starting on the Olivetti project). L. Giovannini, G. M. Oliveri, and M. Nizzoli were responsible for a large proportion of the workers' houses at Ivrea, 9-10, Nizzoli is also the designer of the Olivetti typewriters and machines, 16-24. L. Lionni, who is art director of the Olivetti Corporation of America, designed the San Francisco shop, 45, and the Olivetti exhibit at the

Museum of Modern Art in New York. N. Renacco was the architect of the new carpenter's shop at San Bernardo near Ivrea. E. Vittoria designed the lately completed research centre at Ivrea, 11, and the machine-tool shop at San Bernardo. Peressutti, Belgioioso, and Rogers were commissioned to design the shop in New York, 39-41, and artists such as R. Guttuso and C. Nivola have at different times been employed in the decoration of Olivetti shops.

The Olivetti publicity material also owes its high standards to the men who are responsible for its design. M. Nizzoli and G. Pintori are among the best known Italian contributors—Nizzoli was responsible for the creation of the sign of constant progress, 26, which frequently appears upon Olivetti propaganda booklets, and Pintori designed the covers for the prospectuses for the portable Lettera 22 typewriter, 27, and the Tetractys calculating machine, 28.

The publicity field is, however, not limited to Italians by any means; one of the most familiar Olivetti publicity designs—the amusingly vivacious figure of a woman attired in typescript, brandishing the Lettera 22, 29, was the work of Savignac, the French designer, who works extensively for Olivetti. The whole Olivetti publicity services, which were largely originated by Signor Olivetti himself, are now under the direction of Ignazio Weiss who, in collaboration with Pintori, is responsible for the production of the famous Olivetti calendars.

Signor Olivetti's own extra mural activities, if they may be so described, include the presidency of the Istituto Nazionale di Urbanistica, of which Bruno Zevi is the general secretary, apart from town planning, this organization publishes the review *Urbanistica*, and books and pamphlets upon kindred subjects: the patronage of *Sele Arte*, a review which is concerned with the fine arts, art history, and decorative and commercial arts, edited by the well-known art historian Carlo Ragghianti; and, of course, the *Movimento Comunità*, that includes among its many and varied activities the creation of community centres, the production of a monthly review—*Comunità*—and an extensive publishing business, which during the last ten years has brought out more than 200 books as well as pamphlets and other publications.

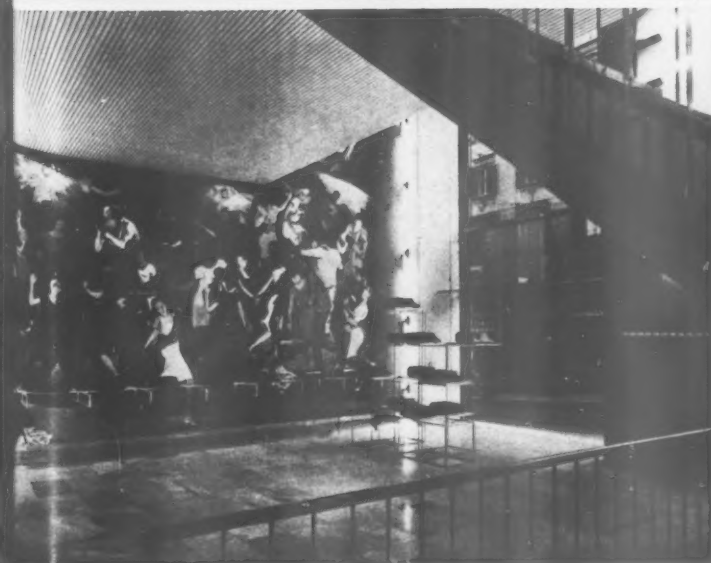
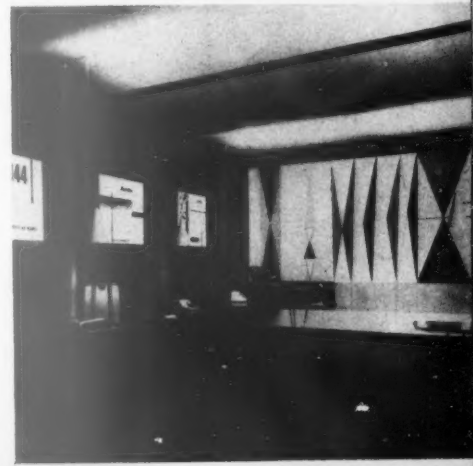
As a man Signor Olivetti is extremely modest in his estimate of what he has achieved, and any suggestion that he might be regarded as a modern Maecenas, or even a contemporary edition of one of the great patrons who contributed so much to the flowering of the arts in Renaissance Italy, he brushes aside.

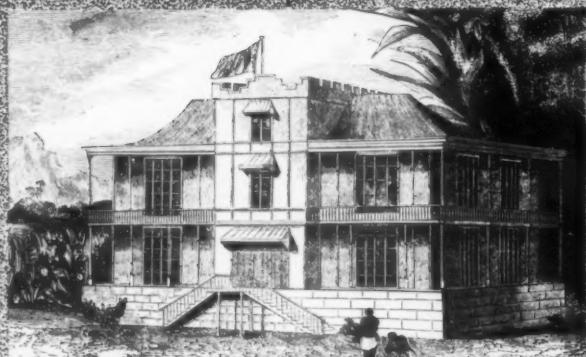
Whether one agrees with him or not, one cannot doubt the absolute sincerity of the man, or withhold one's admiration for the mind which is prepared to give practical expression to a philosophy of life which most men are content to leave in the realms of theory. If his past achievements provide a basis for expectancy of future performance, it is likely that much more will be heard of Signor Olivetti's conception of a pattern of life which is designed for man, instead of trying unsuccessfully to fit man like some cog into a vast machine, in a world made hideous by blighted landscapes and soulless urban agglomerations, with all that they entail in terms of human unhappiness.



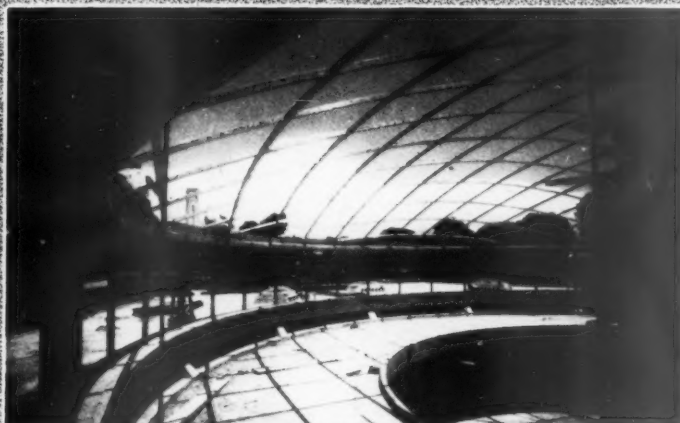
Olivetti show-rooms, no less than the products and the publicity, have helped to take the Olivetti house-style to the world; 39-41 are three aspects of the New York showroom, designed by BBPR of Milan; 42, the small showroom in Kingsway, London, by Emilio Bonfante; 43, in Nottingham, by Gordon Andrews; 44, Rome, and 45, San Francisco, Cal., by Luigi Lionni.

39	41
40	
42	43
44	45





Britain pioneered the export of prefabricated buildings: as early as 1843 a prefabricated iron palace, 2, was sent from London to Calabar in Nigeria to house King Eyambo and his three hundred and twenty wives. After a long period of disuse, the technique was taken up again after World War II, at first with standardised buildings, but later including one-off designs. One of the most interesting of these is the dome for the Ghana National Museum, described in the following pages, which was given a trial assembly at Woking, 1, then dismantled and re-erected at Accra. The progress photographs show the completed ribbing, 3, the fixing of a pair of ribs in the r.c. ring beam, 4, and the roof partly clad with sheet aluminium, 5.



MUSEUM AT ACCRA

ARCHITECTS

DRAKE AND LASDUN of Fry, Drew, Drake & Lasdun

1. the museum from the east.



The building was designed for the Public Works Department of the Gold Coast Government as the first stage in the establishment of a National Museum, and was opened at the celebrations held in March, 1957, to inaugurate the independence of Ghana. The building had to provide for a large open floor area, a well-lit series of wall displays, a small upper level for storage, filing, office accommodation and small scale exhibits, and space for the occasional showing of films for 20-30 people. In addition, the warm, humid climate needed highly reflective waterproof roof surfaces for heat and rain protection, overhanging roofs to provide wall-shade and storm protection and maximum openings for cross ventilation at all levels.

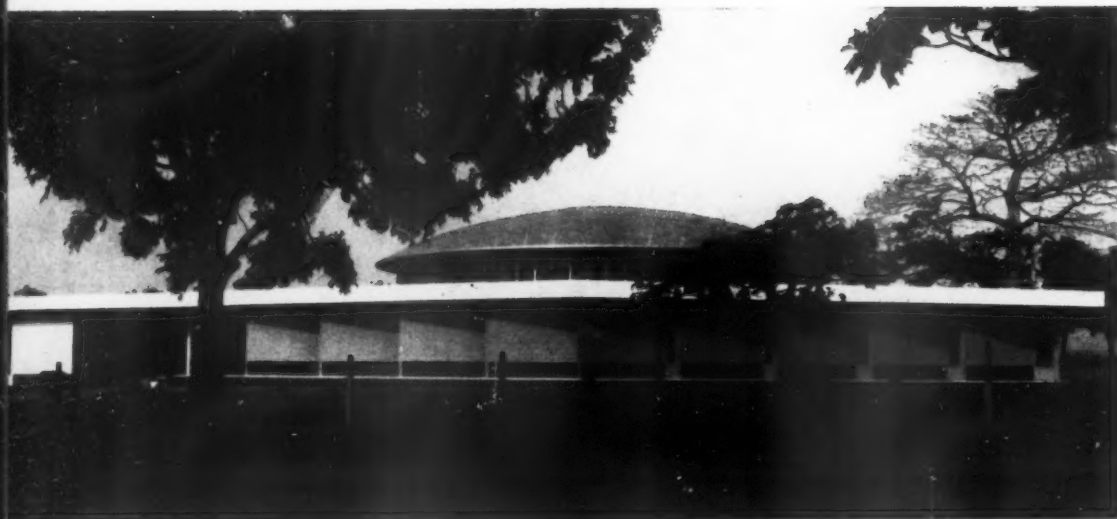
The walls are r.c. and rendered blockwork; the dome was built in aluminium and was prefabricated in England (see opposite page): with its high resistance to corrosion and its low density, aluminium was clearly an

ideal material for a tropical dome, whilst a shell concrete dome would have presented considerable technical problems locally, such as shuttering, insulation, waterproofing and maintenance.

The dome is constructed with a stressed skin 80 ft. in diameter supported on a r.c. ring beam. It consists of a framework of extruded box-section aluminium ribs in compression, covered externally with aluminium sheets. The aluminium ribs, exposed internally, are all curved to an 84 ft. radius and are all great circles of a sphere: they are joined together by inner sleeves and slotted and interlocked at the intersections, thus forming a flush aluminium soffit to the ribs.

The r.c. ring beam takes up the tension, and the uplift due to wind forces is taken up by the aluminium roof sheeting in tension. Expansion and contraction is taken up by the dome rising and falling at the centre, the ends of the aluminium ribs having spherical seatings to allow

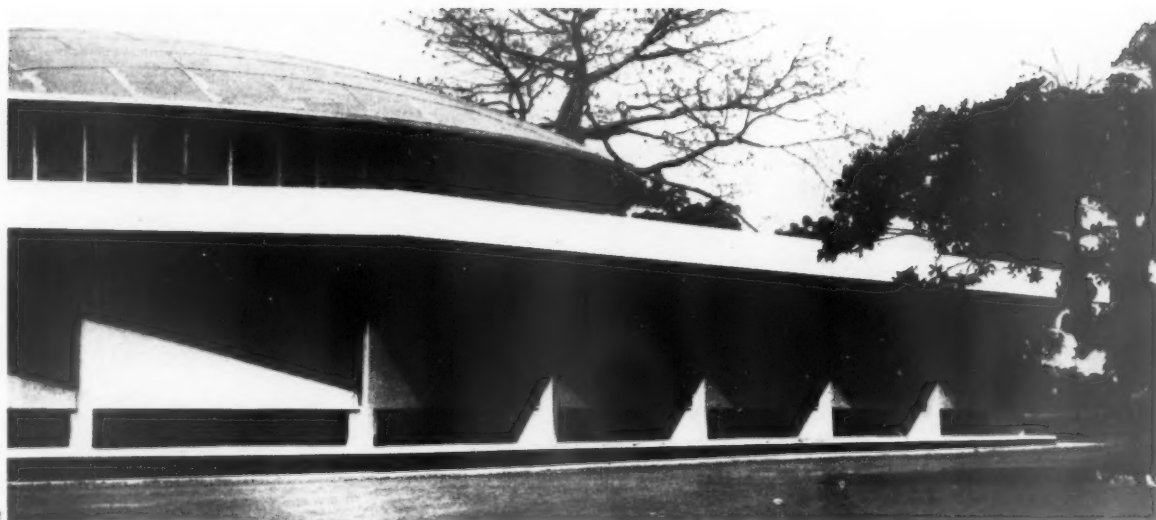
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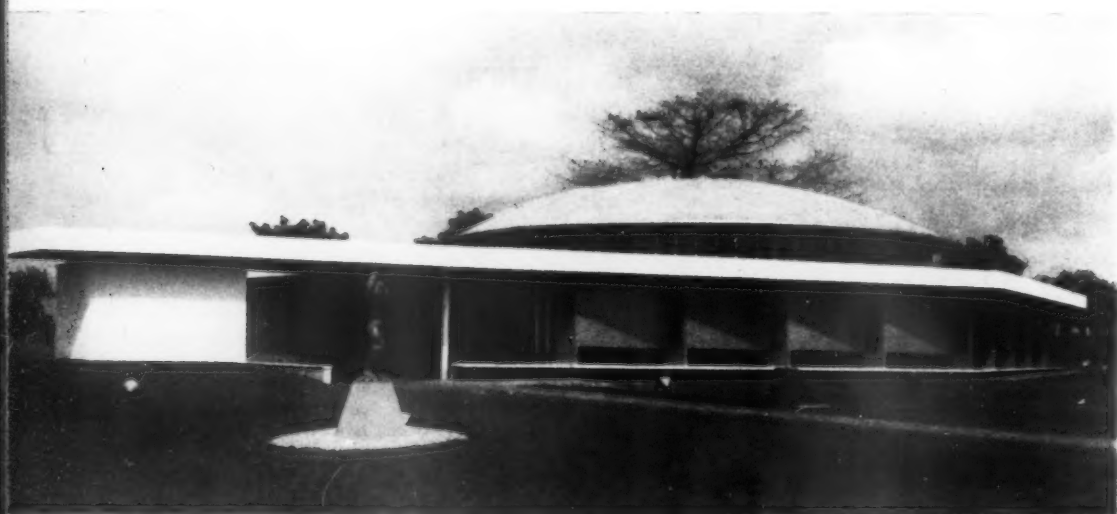
MUSEUM AT ACCRA

2

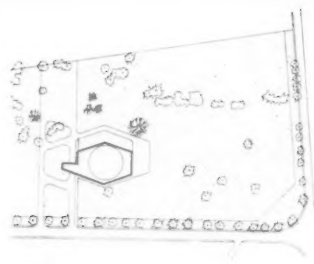
2. the east side from the approach road. The car park is beyond the porte-cochère on the left. 3. a close-up of the panel construction at the north-east corner. The space beyond will be made into gardens and used for open-air exhibits. 4. the main entrance: garden store on left, terrazzo sculpture by Dr. Oku Ampofo in foreground.



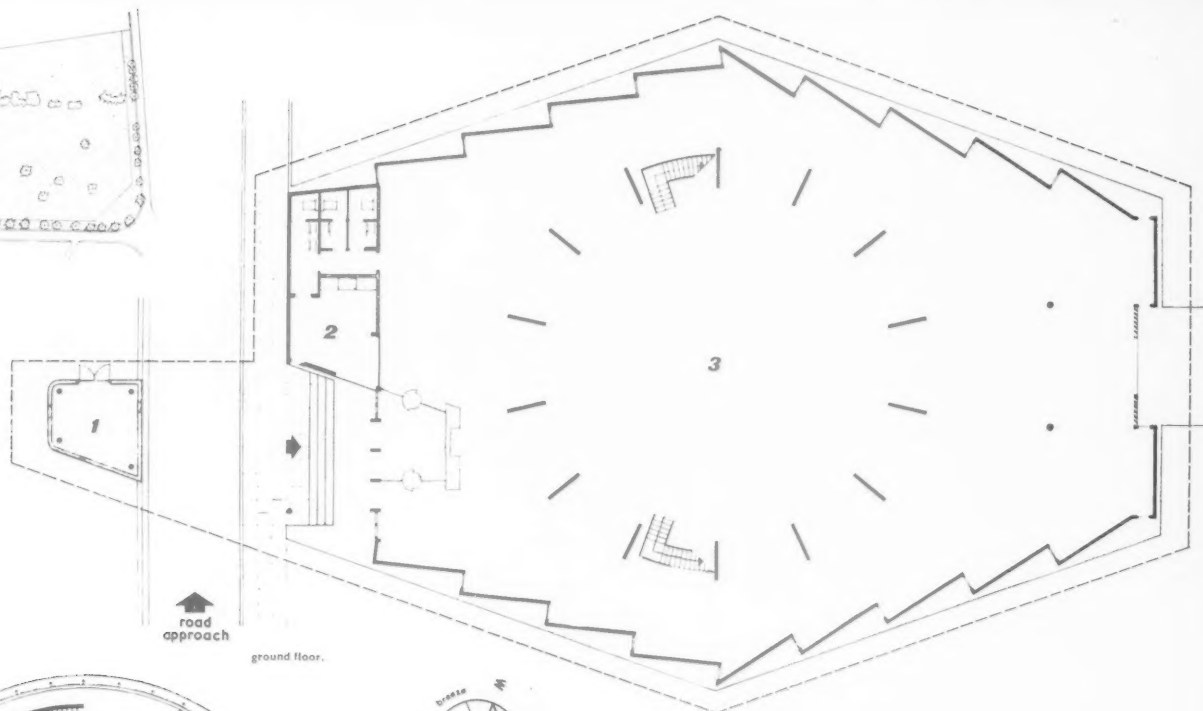
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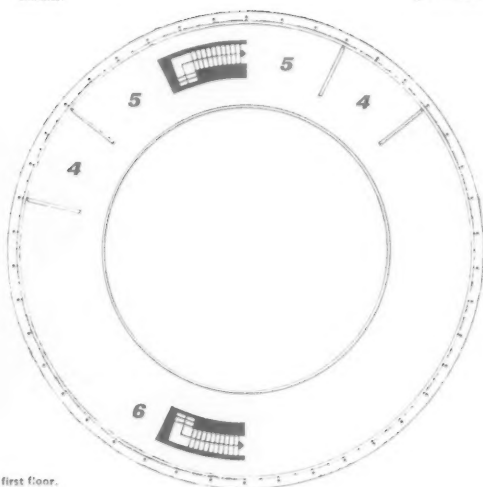


site plan.



ground floor.

- key.
1. garden store.
 2. store.
 3. exhibition hall.
 4. office.
 5. filing.
 6. storage and special exhibits.

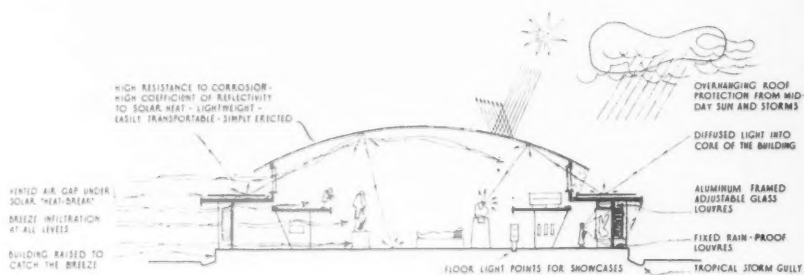


first floor.

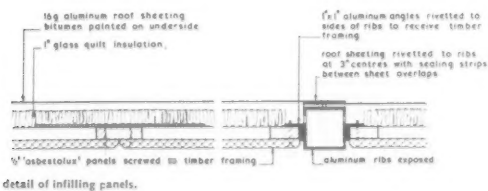


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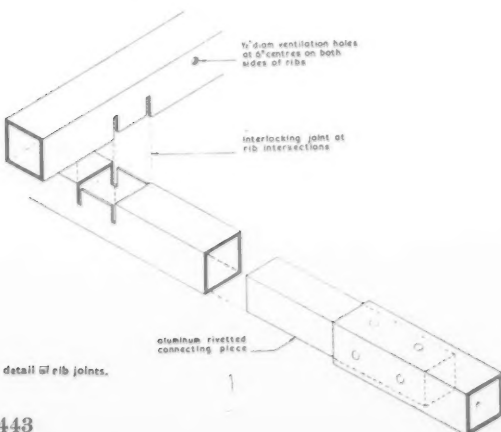
climatic and functional analysis



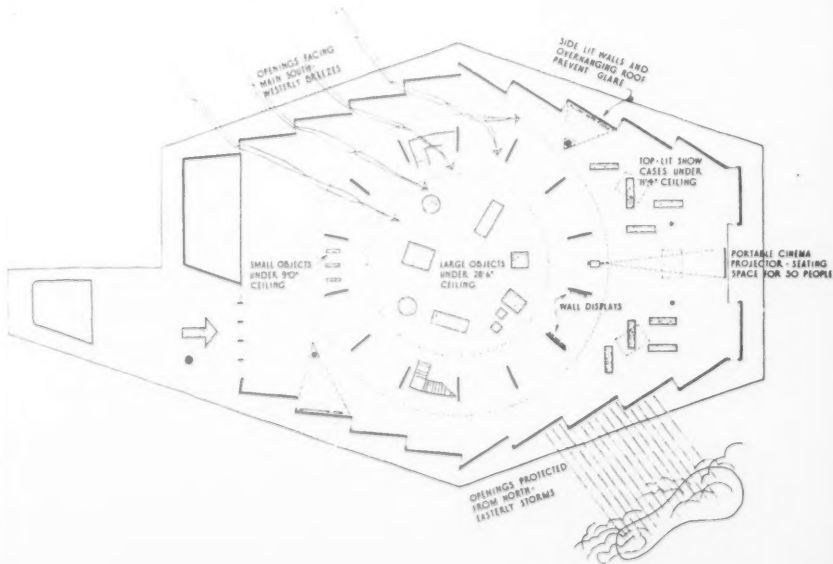
dome details



detail of infilling panels.



detail of rib joints.





5

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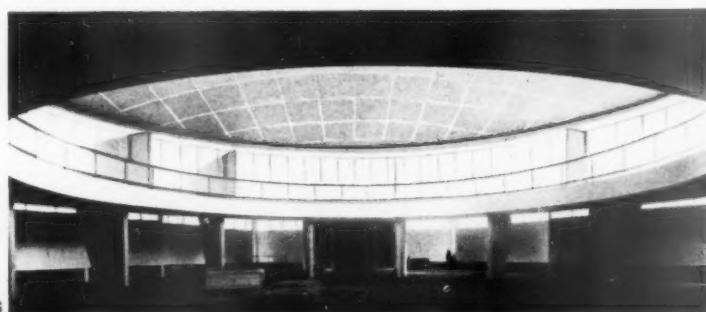
for any slight movement of the structure. The roof overhang, the soffit of which is lined with aluminium sheets, is cantilevered from the concrete beam, and provides protection from sky glare and heavy rains. This extremely lightweight roof—4½ tons, i.e. 2 lb. per sq. ft.—requires only a minimum of support—forty-two 3-in. square H-section aluminium columns—thus allowing maximum breeze infiltration from all sides.

A trial erection of the aluminium structure was made in England prior to despatch, and it was then packed in three crates, two each 11 ft. by 5 ft. 6 in. by 1 ft., for the sheeting and one crate 20 ft. by 3 ft. by 3 ft. 6 in. for the ribs and columns—a total weight of 5 tons. The cost of the dome, including delivery, was £3,978.

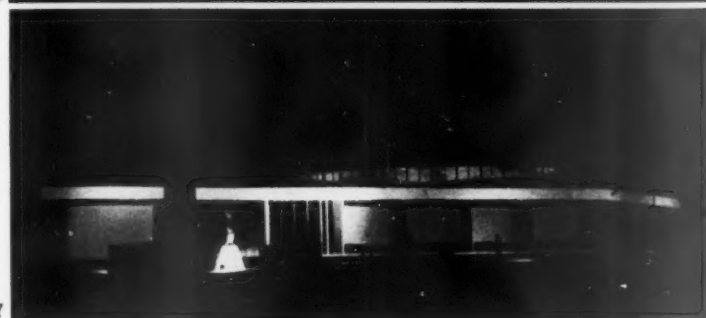
At Accra, the dome was erected by five men in four weeks. The ribs, marked for identification, were set out on the ground below the dome position. The two main ribs were positioned and supported on a centre scaffold followed by four ribs intersecting at the quarter points. This established the basis and framework for erecting all the remaining aluminium ribs and once these were all in position, the remaining shoes were welded to the mild steel shelf on the ring beam and the adjusting screws engaged in the spherical seatings so that they were all taking the same thrust.

The external finishes, other than the exposed aluminium, are painted concrete; internal finishes generally are painted rendered walls and ceilings. The flooring is terrazzo tiling. The museum was begun in February, 1956, and completed in November; the contract price was £38,047.

5, the first floor gallery and detail of clerestory and roof. The adjustable glass louvre blades are held in aluminium frames. 6, interior, looking towards the cinema, before exhibition cases were installed. 7, the east side of the museum, floodlit.



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BALMES



1

HOUSE

Balmes House is seldom now remembered, yet in its last days its appearance was recorded in at least two sets of water-colour drawings, and it was drawn and engraved several times in the eighteenth century. But architectural historians seem to have overlooked it. The chance that in its last role, as lunatic



1, in title-piece, front view of Balmes in 1852, by G. W. Toussaint. 2, rear view also by Toussaint, 1852.

asylum, it may have sheltered Mary Lamb, may be known to a few more people than the chance that its front elevation was unique in England in its time.

Luckily, in 1852, a few people thought it interesting enough to

record before it went. The Tyssen Collection of books and prints now in the Hackney Borough Library includes a set of views (five exteriors and two ceilings), signed 'G. W. Toussaint' and dated 1852, three of which are here reproduced for the first time. Others, by J. W. Archer, are in the British Museum.

The *Illustrated London News* for June 5, 1852, carried a prominent article on 'this interesting specimen of olden domestic architecture better known as Sir George Whitmore's House... which will very shortly be taken down, so that our readers may be glad to have their attention directed to this archaeological relic of the north-eastern suburbs... one of our earliest specimens of brickwork and of the Italian school of architecture.' Its site lies in De Beauvoir Road, London, N.1, near Kingsland Road and the Regents Canal.

Indentures of sale now preserved at the Public Record Office establish that the house was in the hands of the Whitmore family from 1634 to 1687. It appears from the document of 1634 that Sir George Whitmore had been living there as a tenant, leasing the house without most of the

surrounding lands, for eight years previously (1625 had been a bad plague year, and Balmes was almost two miles from the Royal Exchange). In 1634 his three trustees seem to have acquired vacant possession of the rest of the property, turning out all the other copyholders and tenants on the fairly extensive estate, and acquiring Sir George, as it were, along with the house.

Whitmore, well connected and no shopkeeper, was a Royalist. He was Lord Mayor in 1631-32 and the portrait at the Haberdashers' Company, of which he had been Master, dates from that year: it shows a rather majestic presence in three-quarter length, and one might guess at a painter such as Cornelius Johnson. The Whitmore family came from Shropshire, and he owned manors in Somerset and in Essex. He was a member of the Virginia Company from 1609. He is said to have given a large sum to the reconstruction of St. Paul's during his year in office (the year before Inigo Jones was commissioned to do the work, this would have been—and a year after the death of Dean Donne, to put everyone into the picture). Whitmore contributed money to the King's cause—voluntarily, that is—and was imprisoned by the Parliament when war began in 1642. He died during the Commonwealth.

William Whitmore, his son, I think we can assume was not the building type: during the 1670's he was characterized in the conversation of Lord Keeper North in *The Lives of the Norths*, who were relatives of his, as 'one Mr. Whitmore of Balms near London, a humorous old gentleman but very famous for the mere eating and drinking part of house-keeping.' He had been living at Ramsay Hall in Essex, up near Harwich, before his father died, and after living for twenty-four years at Balmes and marrying one of his servant maids in his old age, had himself buried in Essex. His one son died under age and three family trustees sold the estate of Balmes in 1687 to a gentleman from Guernsey named Richard de Beauvoir.

I have gone into Sir George's constructive character and his son's unconstructive character because someone may think this colossal classical order was more likely after the Restoration, and because the names of two of these trustees, together with the architectural oddity of the house, may bring to mind an architect who, one can be quite sure, had nothing to do with it: Captain Winde or Wynn. One trustee was the Earl of Craven, whose mother had been a sister of Sir George Whitmore's and whose collection of houses included the Dutchly vertical Ashdown. The second trustee was Lord Powis, whose mother was a sister of Lord Craven's—Lord Powis had been recently released from the Tower on the uncovering of Titus Oates and a year later was to follow James II out of the country. Winde was building for both Craven and Powis, but I do not think he was reviving artisan classicism of the 1630's for William Whitmore. (As for Lord Craven's old house in Drury Lane, it was an even less sophisticated mixture than Balmes, and another story.) The third trustee was Lord North and Grey, one of Whitmore's relatives in the North family. (There is no suggestion in the *Lives of the Norths*—or, indeed, in the appearance of the house—that Roger North of the Middle Temple gateway put a new front on Balmes, either.)

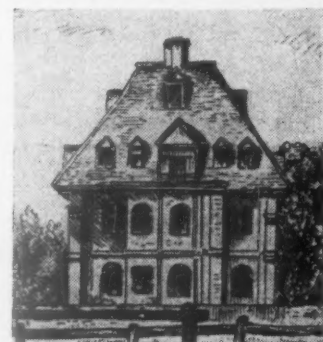
Architecturally, Balmes was an unusual example of bricklayer's classicism, one of a group of houses

built during the time of Inigo Jones, but largely independent of him. Mr. Summerson's convenient term, 'Artisan Mannerism,' does not altogether apply to the front elevation, 1, because the principal 'mannerist' motives listed by him were not present: no 'Holborn' gables, no architraves breaking into scrolls and half-pilasters. But the interrupted entablature and the extra spacing at the corners can be called artisan-mannerist.

It is odd to find a merchant's mansion of this period inclining more toward the severe than the busy, but a rather grandiose ungainliness betrays it as craftsmen's classicism—not the more mature 'Dutch' classicism employed later on by May and Winde and Hooke.

That English bricklayers had been for two or three decades familiar with the use of the giant order is shown by a document preserved at Dulwich College. This is important: reliable dates for the beginnings of 'artisan classicism' are so few. It is a contract for Edward Alleyn's first building there, dated May 17, 1613 (Inigo Jones had just left for Italy, so he is safely out of it), between Alleyn and John Benson of Westminster, bricklayer, for 'a certain buildinge of brick... according to a plott thereof made and drawn by the said John Benson,' and specifying that 'the forefront... shalbe bewtified with sixe Dorick pillasters with pettystalls, bases, capitalls and cornishe to reach from the lowest part of the foundation within the grounde unto the raysinge peece' (a height previously given as thirty feet). Benson's facade was gothicized in the nineteenth century, but Pocock's School in Rye probably conveys the idea.

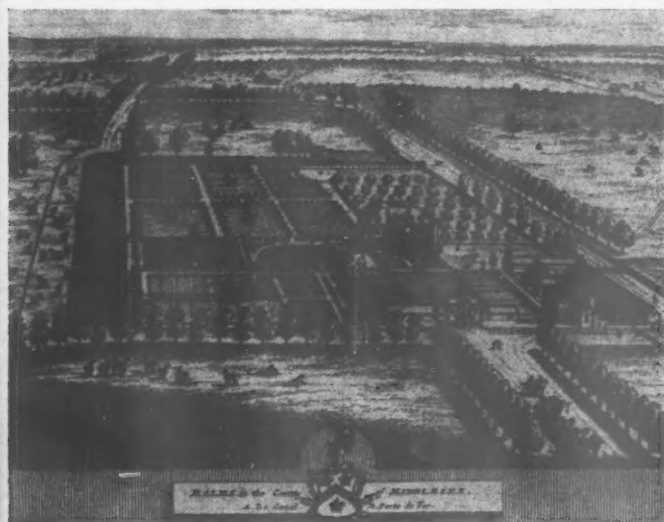
The doubling of the giant order on Balmes, however, may have been unique in England in its day. Artisans like Benson had been brought up on Serlio, and manipulated his designs in a free way. The more sophisticated, irregularly spaced flat order on Broome Park, Kent, of 1635-38, may echo a design in Serlio (VII, 41), 8. The giant order that was being adapted to town houses in the 1630's was usually raised on a ground-floor base in imitation of the Covent Garden



4, east end of Balmes, 1796, from *Lyson's Environs of London*, vol. II.

houses: the row in Great Queen Street by Peter Mills comes to mind. Thanet House (later Shaftesbury House) in Aldersgate Street, of about 1642, 7, was another example of town-artisan mannerism; perhaps it was also by Mills.

Although there is no dated view of the house earlier than 1707, it seems highly unlikely that the front elevation was added at the end of the century by De Beauvoir. For one thing, even though unique in a way, when seen in the context of other brick architecture of the 1630's, it seems to fit. If such a change had

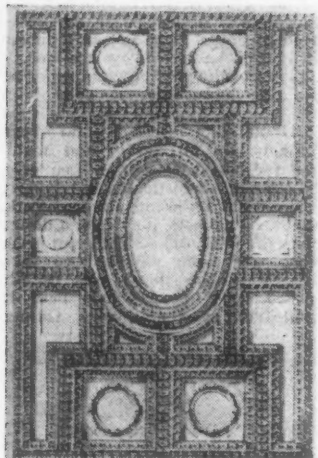
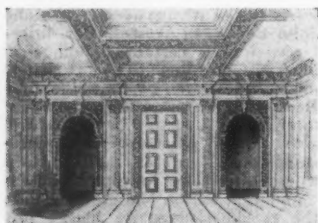


3, plate from J. Beccorell, *Les Dédices de la Grande Bretagne et de l'Irlande*, Leyden, 1707. First dated view.

been made around 1700, the inordinately high roof would probably have been lowered or disguised at the same time.

The gateway, visible in the view of 1707, 3, was torn down about 1794, when it was noted by Sir Henry Ellis for his history of Shoreditch. If he was right in saying it bore the date 1623, the gatehouse was built before Whitmore's time. Ellis included the interesting item that Balmes was once 'ornamented with the busts of the twelve Caesars upon brackets.' De Beauvoir could have added these. The north front of Ham House was decorated with such busts about 1675, but so of course had been Hampton Court, Wollaton, and others. No marks of such brackets seemed to be left on the brickwork.

The rather overweening roof had two rows of dormers—as if doubling the garrets were a fitting climax to the paired pilasters and modillion brackets below. One of the few remaining English houses with two rows of dormers is at 19 St. George's Square in Stamford, a smaller and somewhat later house, but the dor-



5, possibly the first-floor great chamber (Ill. London News, June 5, 1852) over the older hall, 6, one of the ceilings (as drawn by Toussaint, 1852).

mers have the casements and little hipped roofs that Balmes will originally have had (the side view in Lyson's shows these, 4) and there is the same moulding at the top of the roof, also a feature of Thorpe Hall (1653-56) and once the basis of a balustrade at Wisbech Castle (1655-57). The double row of dormers was common enough in northern Europe.

Furnival's Inn of about 1640, which looked rather like a Netherlandish town hall, had a vast roof, although, if eighteenth-century views can be believed, with nothing like the pitch of the roof at Balmes. If Chevening was the first of the 'regular' houses to have a hipped roof, it did not attempt such height. The Balmes roof was in its way just as 'unclassical' as the 'Dutch' gables on Swakeleys or Broome Park.

I should like to suggest, tentatively, that there is more than two English generations' digestion of Serlio here, that an engraving of

some steep-roofed French building, perhaps of part of the Tuileries, was used. Mathieu Mérian's view of Paris in 1615 shows Bullant's pavilion (between De l'Orme's and Du Cerceau's work) with its paired colossal pilasters (later duplicated by Le Vau at the Pavillon de Marsan end). This combination, of high roof and more than one row of dormers with a mannerist use of the classical orders, began in France anyway. Whether Whitmore's nephew, Lord Craven, who came back from the wars in 1633, might have engaged in some correspondence for him or obtained engravings from, say, Sir Balthazar Gerbier, who was in Brussels, may be immoderate guessing. The surveyor or bricklayer in charge may simply have owned some French engravings. There is certainly not here any of that new French influence of the Court circles nearest the Queen, noticeable in Jones's work at Somerset House and later at Wilton.

Balmes was no simple matter, for besides this puzzling old-fashioned French quality, with the clearly English brickwork of the 'thirties, there were also apparent remnants of the earlier house. The two-storey piece jutting out on the east side looks like making the best of something already there—perhaps part of the line of an early Jacobean house corresponding once to another extension on the west side—or perhaps even part of a very much earlier tower. Whether it contained the stairs is hard to tell from the one view of a staircase that we have. The woodwork of one of the main rooms looks early Jacobean too, so the work of 1635 may have been mainly a recasing and a new roof outside and much redecoration inside. Someone may well wonder why the whole thing couldn't have been done before Whitmore's time, with 'Sir George's house' merely taking its name from his more resounding personality—only parts of that argument are excellent, for it does seem that the *tout ensemble* could only have happened around 1635.

The career of Sir John Harrison, of Balls Park (Herts) and the Customs House, one of the royalist financiers imprisoned in 1642, must have been similar to that of Whitmore. The exterior of Balls Park, presumably going up between 1638 and 1640 or so, is fussier, more naïve, than that of Balmes, but some of the same craftsmen might have been employed. Oddly enough, there are the same relieving arches of brick vousoirs in the wall over the windows as on the rear elevation of the Hackney house, 2—perhaps habitual with one bricklayer's yard and so more revealing than applied ornament required by the patron. The stricter controlling hand of a more knowledgeable bricklayer-designer is apparent on the front elevation at Balmes, but on the sides and back there was the same rather clumsy spacing of eaves brackets as at Balls Park. Panelling in the room illustrated in the *Illustrated London News*, 5, resembled some at Balls Park.

Richard Sprignell, a man of City family who was made a baronet in 1641, was building a house, now called Cromwell House, at Highgate in 1637-39. He had become Captain of the Trained Bands in 1634. (The fields of Balmes had been in use for City archers for a century, although it wasn't used for the Artillery Company's manoeuvres until after the Restoration). Sprignell's was a more modest house, but with a fine staircase: the stair at Balmes (Archer view, British Museum) was so like it that the same wood-carvers may have been employed. Other staircases of

the same time and type can be seen, in Nash's *Views*, at Aston Hall and Aldermaston, with the same awkward scrolls that were more akin to earlier strapwork than to the heraldic ease of the almost exactly contemporary staircase at Ham House. Ham had more courtly connections.

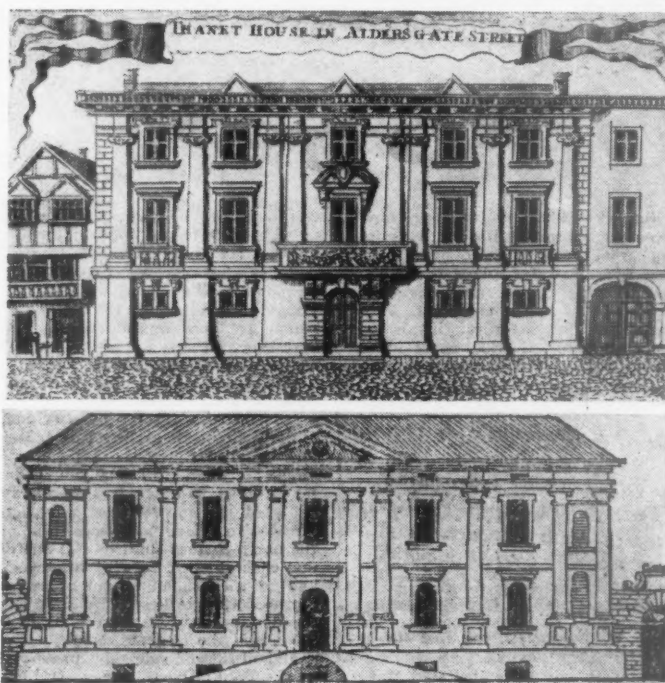
Swakeleys in Middlesex, of 1638, whose owner was Lord Mayor in 1640, shared with Balmes great conservatism in the plan. We have no plan of Balmes, but apparently the old entry into the hall from a screens passage was preserved and the hall was still the main ground-floor room, probably with a great chamber over it. Behind the new regularity of the façade, one probably entered what was really one end of the hall—the ceiling extending over the screen in the Archer view (British Museum) shows this. No doubt the screens passage was extended as a corridor

house had been 'leased by the late Meyer Schomberg M.D. for the reception of lunatics' (DNB says Dr. Meyer Schomberg died 'at Hoxton,' probably Balmes, in 1761). In the early nineteenth century this was run by a man named Warburton, and the place was locally referred to as Warburton's or as 'the Mad House called Sir George Whitmore's.'

Balmes could hardly be called one of architecture's lost glories, but as a rather fascinating stylistic curiosity, and for its historical connections, surely it deserves to be remembered.

Bibliographical Note

Four views by J. W. Archer, also of about 1852, are in the British Museum Print Room (Portfolio XVI, Binyon Catalogue of Drawings by British Artists, vol. I, pp. 32ff); they include the staircase (reproduced in R. Dutton's *English Interior*, Batsford) and one partly Jacobean room. Rasmussen's *Towns and Buildings*, 1951, p. 57, shows the 1615 view of the Tuileries, from Mérian's 'Paris.'



7, town artisan mannerism: Thanet (later Shaftesbury) House, Aldersgate, possibly by Peter Mills, c.1642; now demolished. Engraving before 1676. 8, Serlio, Book VII, page 41.

along the short axis of the house. Mills, even in the 'fifties, kept this arrangement at Thorpe Hall.

The windows seem to have been revised at various dates—probably those on the left-hand side of the rear elevation represent the style of the 1630's. The round-headed windows remind us of Balls Park, and, indeed, of the so-called Dutch House at Kew, of 1631. The shape of the front entrance was not changed (one can see this on engravings of Thanet House) but a fanlight was no doubt inserted later. Over it was once a balcony—there is one in the 1707 view—the 'pergola' of Smythson's drawings of new London houses.

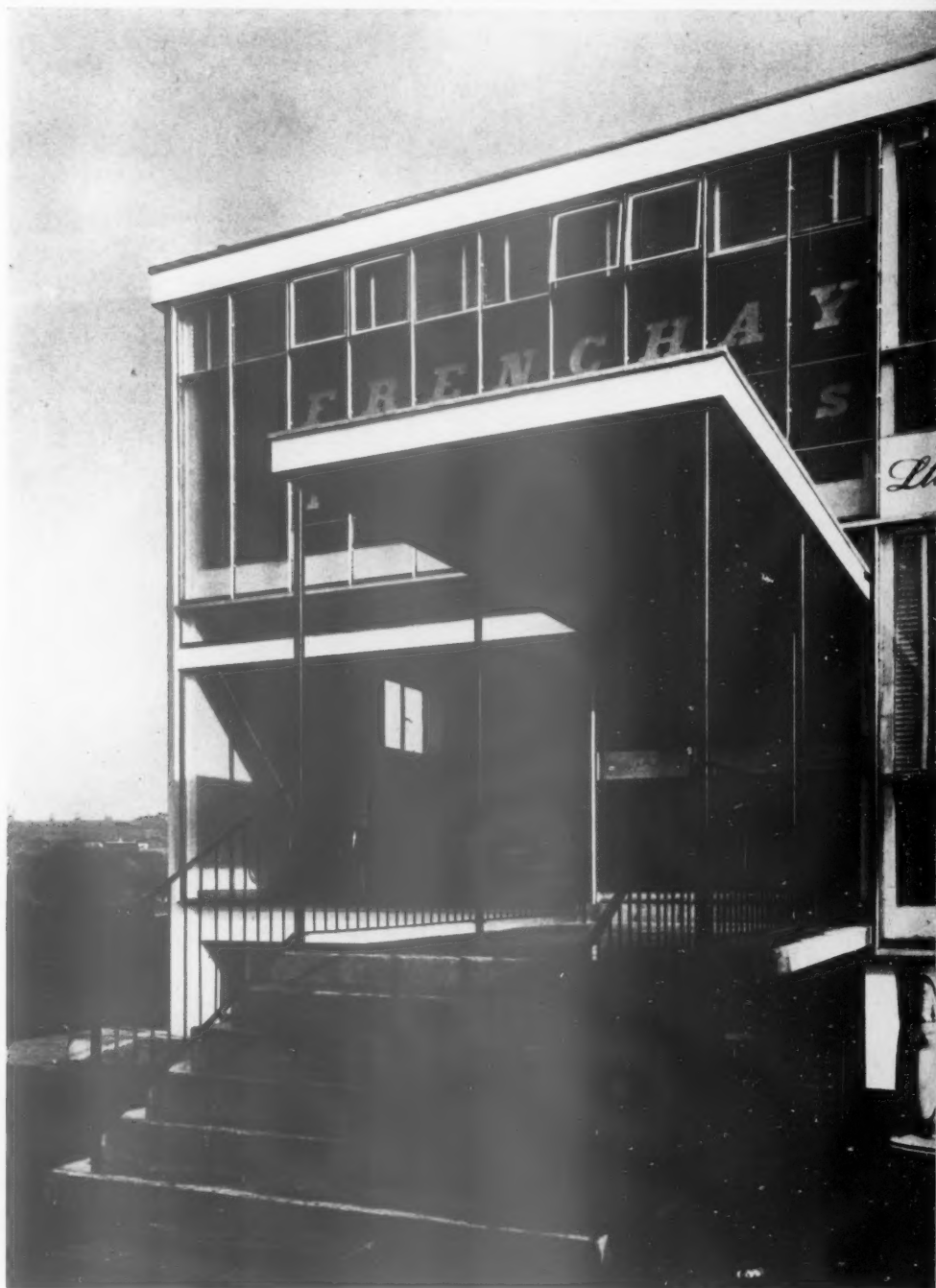
The ceilings—we have evidence for three—were craftsmen's adaptations of the Whitehall court style, 6. They seem to come in between those at Ham House (hall and stair-hall) and those at Balls Park in elaboration of similar motives. Neither Whitmore nor Harrison, we must remember, was in a position to finance interior decoration after 1642, and by the time Coleshill was built about 1650, a fruitier ceiling style was the thing.

Under Richard de Beauvoir, who bought Balmes in 1687, the place became famous for its gardens. See 3. Nichols, in 1788, wrote that the

There is undoubtedly more to be found out about Balmes, or Balmes or Balmes, and its owners in the Public Record Office and Guildhall Library. The Survey of London volume on Shoreditch touches marginally on Balmes and lists some relevant documents, including Close Rolls 3025 (sale of 1634) and 4655 (sale of 1687). The local histories of Nichols (Canonbury, 1788), Lyson (*Enchiridion of London*, 1795), Ellis (Shoreditch, 1798) and Robinson (Hackney, 1842-43) all have information and misinformation about it. The early ownership is confusing. A MS. history of Hackney by Thomas (1832) in the Hackney Library was largely a compound of hearsay and a quarry for Robinson.

The contract at Dulwich, kindly shown to me by the College Librarian, is inaccurately reproduced in the local histories by Young and Blanch. Engraving of Benson's building, *Eur. Mag.* for May 1, 1790. It is said that one reason Soane was chosen to design the new building at Dulwich was it was felt he would have the proper sensibility toward what was then thought to be a work by Inigo Jones!

Whitmore is in the DNB. The Haberdashers' portrait survived the fire of 1666, 1838, and 1940, and has recently been installed securely in the woodwork over a fireplace at the new hall in Staining Lane. Balls Park can be found in V.C.E., *Herts*, vol. III, and *Country Life*, April, 1912. On Peter Mills and Thorpe Hall see Mr. Colvin's *Biographical Dictionary* and his article in *Country Life* for June 6, 1952. De Beauvoir Town is touched upon by Millicent Rose in her *East End of London* (1961). Mr. Summerson's chapter on Artisan Mannerism (*English History of Art*, 1963) and the turning up of the Leyden and Lyson's engravings at the Society of Antiquaries first led me to Hackney and the unpublished views by Toussaint. It is by the courtesy of the Hackney Borough Librarian and the helpful interest of his Reference Librarian that they are reproduced.

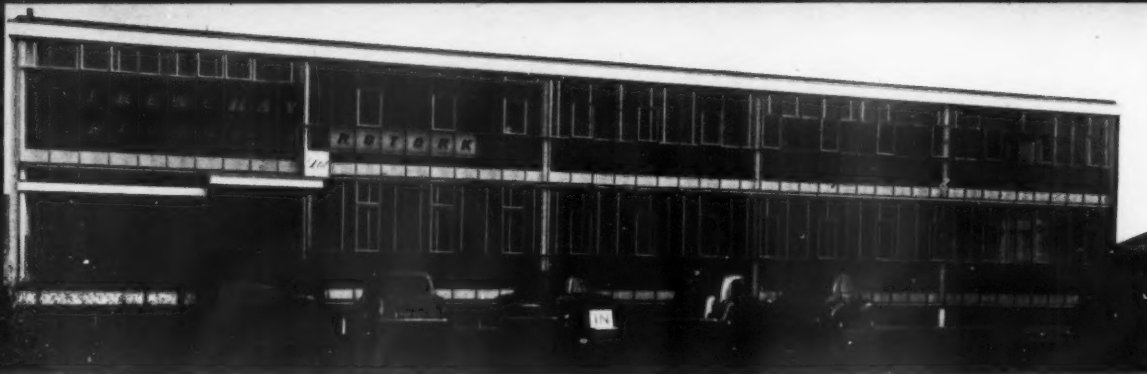


1, the main entrance, which is approached over a reinforced concrete bridge spanning the basement area. The soffit of the canopy is matchboard painted white; the name above the door is etched white on to blue glass.

OFFICES AT BRISTOL

ARCHITECTS: LEONARD MANASSEH AND PARTNERS
ASSISTANT ARCHITECT: BRYAN P. FIELD

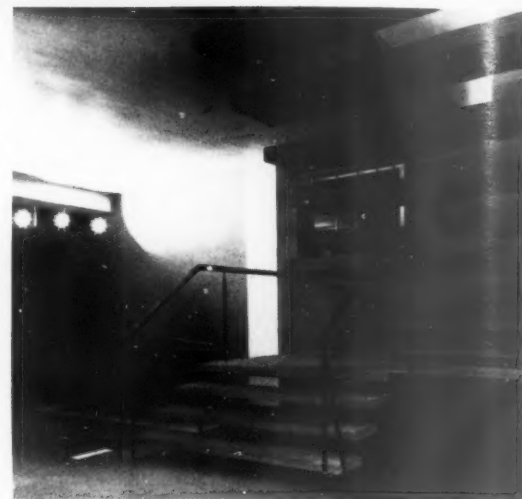
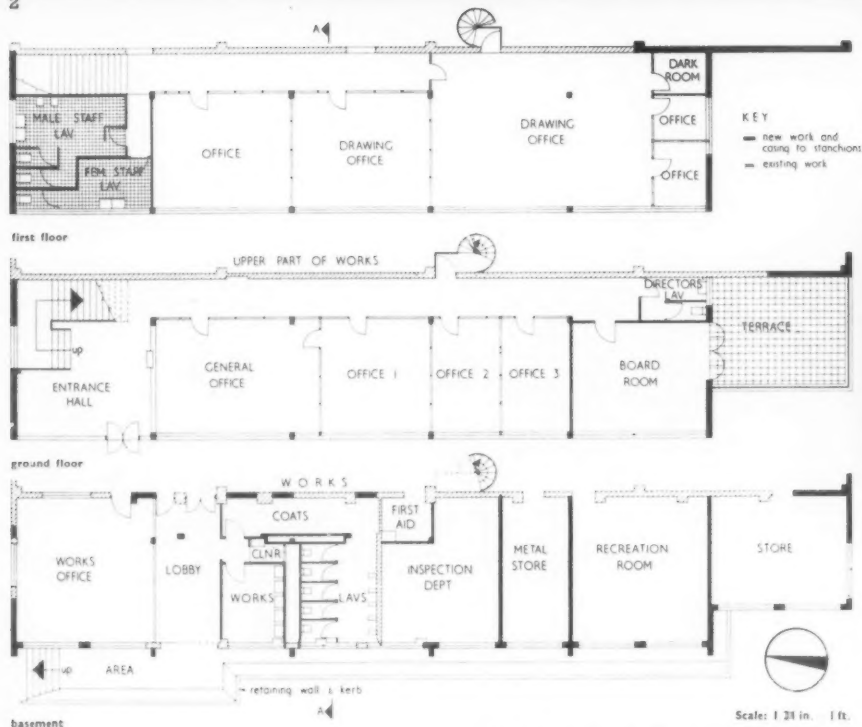
The offices are in Station Road, Kingswood, and are for Frenchay Products, an engineering firm which carried out the erection itself. The main (west) front is clad in aluminium framed curtain walling, conforming to a 2 ft. horizontal module. The brick dwarf walls to sill height behind the curtain wall glazing are painted dark grey, the panels above the main entrance are Bristol blue flashed glass with the lettering etched white; the word ROTORK (an associated company) is ruby red. Entrance canopy is timber framed with a matchboard soffit painted white and black painted steel tube supports. The main construction is steel frame, with precast concrete floors and flat roof; panel walls are of hollow



Offices at Bristol

2, main (west) elevation; opening lights and fascias are painted white; the dwarf walls behind the curtain wall glazing are dark grey.
3, the staircase which has reinforced concrete treads; the stainless steel rods which support the outside edge from a r.s.j. trimmer beam can be seen.

2



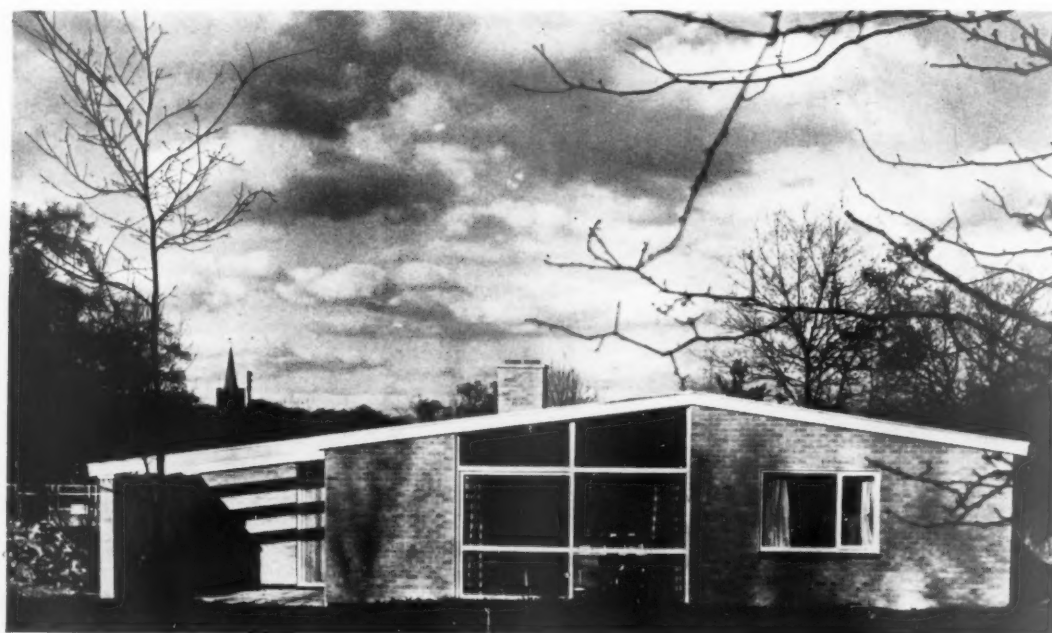
3

concrete blocks. The main flight of the staircase, consisting of r.c. treads and open risers, is supported by the wall at one end and $\frac{3}{4}$ in. diameter steel rods, suspended from an r.s.j. trimmer beam, at the other end; the hand-rail is mahogany. The wall behind the staircase is dark green, that to the left of the entrance cadmium red and the entrance hall ceiling pale blue. The enquiry desk has mirror glass panels, above and below; a screen framed and veneered in mahogany divides the entrance hall from the general office. The hall floor is ceramic-tiled, and the lighting here is by reflector spotlight lamps; elsewhere, except in the board room, where tungsten is used, lighting is by fluorescent battens.

HOUSE AT HERTINGFORD-BURY, HERTS

ARCHITECT:
GEOFFREY
WOODWARD

4, from the south. The living room, centre, has a sliding window.

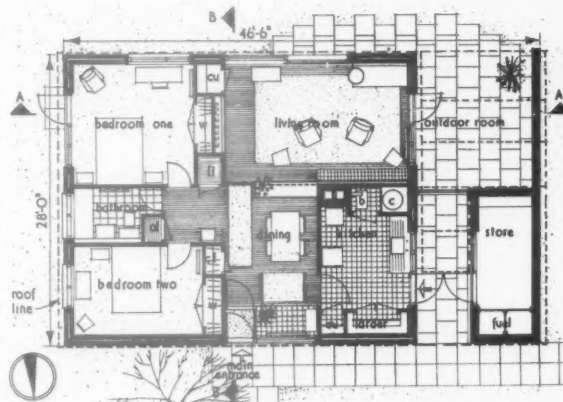




5. looking from the living room, through the dining room, to the main entrance. The dining room ceiling is of untreated pine.

The house occupies a large site in St. Mary's Lane, Hertingfordbury, two miles west of Hertford. The approach is from the north, giving privacy to the outdoor living areas on the south; an unbroken west wall shuts off the road. The construction is 11-inch cavity brickwork round the perimeter, except where glazed door and window units occur; fixed and opening lights and sliding windows are framed in Oregon pine, painted white. The roof decking throughout is aluminium on softwood framing.

The dining room ceiling is untreated pine boarding, which is also used for a panel over the entrance door; other ceilings are plastic. Beside the entrance door, below a fixed light window, is a composite glass spandrel consisting of two sheets painted venetian red between; its internal lining is hard-board. Floors are quarry tile, hardwood block or thermoplastic tile. Heating is by low pressure hot water radiators.



plan. Scale: 1/16 in. = 1 ft.



6, 7

6, south elevation and 7, the west front, which contains the main entrance and all living accommodation.

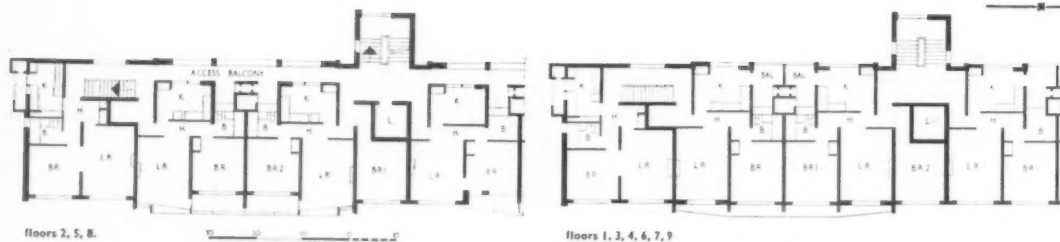


FLATS IN LIVERPOOL

CITY ARCHITECT: RONALD BRADBURY
ASSISTANT-IN-CHARGE: R. BROWN

Coronation Court is a ten-storey block of 114 flats north-west of the East Lancashire Road and Lowerhouse Lane roundabout at Fazakerley. It is on the verge of the Sparrow Hall estate and may be approached from that estate or from Lowerhouse Lane. The block is 330 ft. by 30 ft. by 100 ft. high, approximately one mile from the City boundary; a service road encircles the building giving access to the main entrance on the west or living accommodation side. On the east side is the heating chamber, fuel store, garages, private stores and subsidiary entrances.

The block is constructed on a r.c. raft with r.c. walls running crosswise at right angles to the east and west walls and which are cast-in with the r.c. floors. All structural walls above the ground floor level are 6 in. thick and all floors are 5 in. thick. The external walling is 4½ in. brickwork facing with 2 in. cavity and inner 2 in. foam slag partition. The floors and walls of the flats are insulated against sound transmission, condensation and loss of heat; floor insulation is ¾ in. bitumen bonded glass wool. The main



entrance approaches are paved with broken York stone flags, the main stairs and halls on the ground floor are paved with precast terrazzo tiles with terrazzo surround. Circulation space elsewhere has 1½ in. grano laid in small squares.

The accommodation provided comprises 32 bed-livingrooms, 44 one-bedroom and 38 two-bedroom flats; 25 garages are provided. On the ground floor there are 6 flats (3 at each end); the central space is used for circulation, main stairs and lifts, and accommodates 90 heated stores for the use of the tenants.

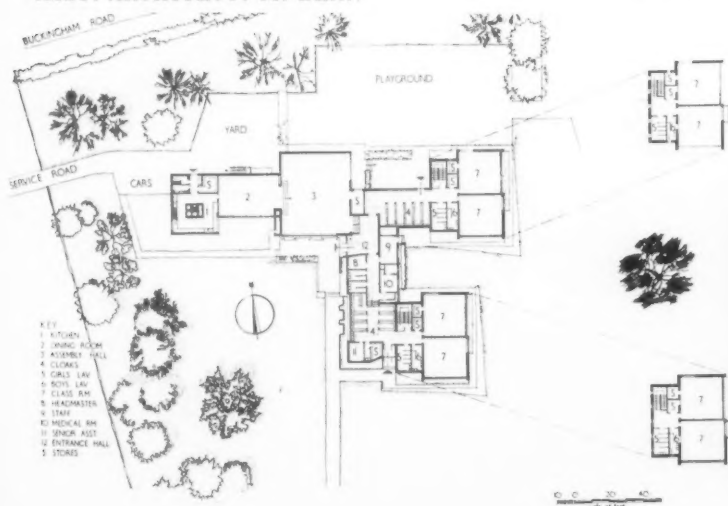
Flats in Liverpool



8, the entrance hall, with the assembly hall through the doorway on the right. The floor is Broughton Moor slate; the tile panel, right, which is black overprinted on blue, was designed by Peggy Angus. The entrance doors and screen are Honduras mahogany. 9, one of the two 2-storeyed classroom blocks, from the north-east.

SCHOOL AT FAR BLETCHLEY, BUCKINGHAMSHIRE

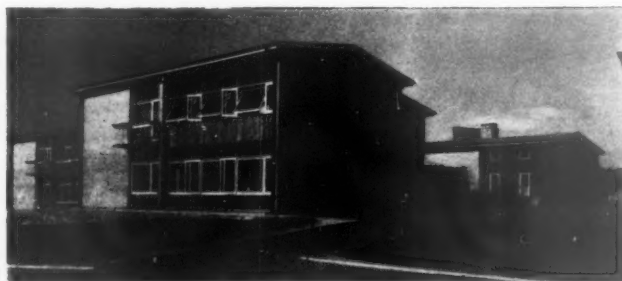
COUNTY ARCHITECT: F. B. POOLEY
ASST. COUNTY ARCHT.: C. HINDLE
ASST. ARCHITECT: M. DEAN



The school, which is designed to accommodate 320 juniors, is on rising ground west of Bletchley.

Construction is load-bearing brickwork; the upper floors are in prestressed concrete units. Roof construction throughout is in timber units. External brickwork is yellow London stocks; all fascia boards are timber and flashings aluminium. Large windows are in softwood painted white with Honduras mahogany glazing beads; small window openings have rendered reveals painted white, and slate cills. External timber cladding is Western red cedar and the classroom balconies are wrought iron supported on steel T-bars.

Floors to the classrooms, assembly hall, dining room and staff room are Rhodesian teak blocks and the floors in the cloakrooms and circulation areas are black and light grey plastic tiles. Ceilings are in insulation board or plaster, except in the first-floor classrooms and two cloakrooms where the soffits of the roofing units have been left exposed and painted.



The name miscellany implies, of course, an architectural miscellany—one that will include subjects which, though marginal to architecture, are nevertheless vital to it.

miscellany

COUNTER-ATTACK

BUREAU BULLETIN

This will now be a regular monthly miscellany feature, operated by the Counter-Attack Bureau. Cases under investigation will be given a code number which for easier identification will be used throughout the progress reports in subsequent months. Examples of good planning and of outrage averted will also be included regularly.

9. Kings Road, Chelsea (London County Council): open-air car sales site on a cleared bomb-site almost opposite Chelsea Town Hall. The site is LCC owned and scheduled eventually for a fire station; it was given by the Valuer (without asking planning permission!) to a car dealer in exchange for premises in Stockwell which were needed for housing. When the residents objected, planning permission was granted retrospectively; when the Chelsea Council again objected they got no satisfaction beyond a clause saying that it shouldn't be floodlit after 7 p.m. The only proper solution for this site is the sort of thing that was there before the bombing—multi-storey urban terrace houses: the LCC's housing division would make a good job of them. If there is to be a fire station it should be at the end of the site, which is long and narrow, and not breaking the line of the Kings Road with an unrelated public building, however well designed (in any case, any sort of direct access by fire engines to the Kings Road would be dangerous). Meanwhile the retrospective planning permission should be revoked (it merely looked like one department covering up for another) and the Valuer's department should then do what they should have done in the first place—find a site which would suit both dealer and the local residents. There seem to be too many cooks stirring London's planning broth.

10. Westgate Fields, Chichester (About six bodies: chiefly Sussex County Council and Chichester City Council): The County propose to implement the Development Plan and put three schools and a ring road through Westgate Fields. Because they are still completely unspoilt, any invasion of these meadows would destroy them completely. Chichester is the only cathedral city in Britain where you can walk straight out of the centre of the city into true countryside (see Counter Attack, page 364) and hence the meadows are as much of a national monument as the Cathedral itself and must be preserved as they



1

are—vested in a body like the National Trust as farmland—(a 'public park' in this case would be worse than building all over them). The bureau is getting all the publicity it can for this and will publish a longer article on the Fields later this year.

11. Halesowen, Worcs. (Borough Council):

The main approach to Halesowen from the E. used to be cottages; now it is a vast and arid garden, 2, breaking open what was a compact—but not squalid—industrial town. In an area where every available piece of open country is being built over avidly—Halesowen and Birmingham are now finally joined up—the ground would have been well re-used as housing for those who want to be at the centre of things—as old people's



2



3

cottages, e.g., with an internal court. And the public garden?—well, right next to the site is a deep wooded valley, 3, now neglected, part of the original romantic early-industrial landscape. If the seats had been put here there would have been a local park in a local style to be proud of, for the landscape is ready made, instead of an out of place imitation of a style that is the same from Cornwall to Cumberland.

12. Nottingham, Collins Almshouses (City Corporation):

These are (were!) among the best of their date—1700—in the country. The Corporation bought the site to put an office building on it, and started demolition at 4 a.m. one morning last summer without Ministry approval. A telegram from the Minister halted the wreckers with the job half done, and the ends of the wings were left as gaping wounds, 4. The Corporation now await approval to demolish the rest, happy in the knowledge of a *fait accompli*. Yet it needn't be a *fait accompli*: the Ministry has a splendid chance to prove that it won't be trampled on. It takes its

duties seriously enough to compel demolition of something done against planning permission by a private individual: exactly the same principle could be used to compel Nottingham to rebuild the almshouses—measured drawings will exist. It



4

would be no more of a fake than most of the Wren City churches; it would be a splendid symbolic monument to the system's integrity. Otherwise, every philistine body that thinks it is big enough will act first and get permission afterwards. As can be seen from the City Hall and the gardening in front of it, Nottingham has very little idea of what a city centre ought to contain: 'much too valuable for almshouses' was their reaction to the bureau's enquiry. Yet *exactly opposite* the almshouses is a great open area housing one-storey dwellings at a very low rental—cars, to wit. A truly progressive City Council would have put an office building above the car park and have been proud to keep the almshouses. Nottingham evidently hasn't the nous.

13. Halifax Street, Sydenham (London County Council):

Halifax Street is a tiny self-contained stockbrick street near the Crystal Palace. The LCC propose demolition of some of the houses as unfit and have included the rest of the street under the weird and insufficiently known system of 'added land' by which a clearance area can be extended to make it tidier for redevelopment. On enquiry, they said it was done because 'we couldn't do anything with these small bits of land.' In fact the LCC has some of the best teams of housing architects in the country who are already planning grafting operations (e.g., at Brandon Estate, Southwark), and who could make very good use of just such small bits of land for urban infill.

The LCC are doing fine work in giving new life to London's slums: but this is a long way from the normal clearance area. It is a community, the inhabitants like living here, they care for their houses, 5-10, over page. One or two may need replacement by infilling—not many, for if they are substandard the reasons are only technical ones—but to redevelop the whole street would be to destroy a happy community; something that amorphous sprawling London can't afford to lose, even though it can never appear on the housing returns. Below we print a *cri de coeur* from one of the inhabitants about the proposed demolition. There will almost certainly be a public inquiry at which the bureau will be represented.

an anxious street

Halifax Street, S.E.26, has been waiting for a year to know if the High-ups are going to smash up what is one of the few remaining village streets in this area. It is a year since the Valuer sent his men. They walked down the middle of the street with their note books and knocked at the doors to make their first five-minute inspections. They shrugged their shoulders when questioned by the anxious owners and occupiers. Perhaps after all they may leave this street as a memento of the

past, for as an entity it has great charm and character. During the course of their 120 years the solid little houses have seen the glass towers of the Crystal Palace rise and fall, and now from one end of the street you may see the magical television transmitter being erected on the old Palace site. The great houses of Sydenham are crumbling and decaying up on the hill. Too many servants needed. Creepers and vines squeezing through the bulging rotted floorboards and strangling the chimney pots; peeling wooden paneling; clammy fungi squatting together round the empty marble fireplaces; mouldering ornamental ceilings clinging frantically to broken laths. Halifax Street can lay no claim to the splendours that once belonged to the rich Sydenham Hill mansions. The practical and simple little cottages housed the poorer people who served the richer people above.

At one end of the street is the grocer's and post office. The post office, framed in hanging hams and shelves of jam and vinegar, must have served the public for about a century, whilst the Boucher family have been grocers here for 130 years. 'The Woodman,' on the opposite side of the street, is still backed by a piece of its original flint wall. A few of us might welcome block life with a refrigerator perhaps, but most would prefer to stay with their neat gardens, their cats, dogs and hens. Also for many in the street there is the spectral link with their parents' parents' parents, who lived and died in the cottages before them.

When the minions of the High-ups who walked so heartlessly up and down the street have gone away, rumours flash about. Rumour has it that someone's husband's ashes are put under the apple tree in the back yard. Wild horses will not drag her away. This causes concern amongst us. Then we are set at rest, for a counter rumour flies round that the box containing the ashes has been dug up and placed on her bedroom window sill.

The density of the population in the area is about right according to official statistics and there are plenty of open spaces around and we wonder why are we threatened?

Since the cold courteous men with their note books and measuring sticks were here a certain amount of extra outside painting has taken place. Always well kept and frequently washed down, people have touched up the woodwork a bit lately. My paint is blue, Syd Gibson's next door is black and white, George's is red, old Mrs. Hughes's green. The cockle and winkle man leant his bike on my gates last Sunday and the zinc bath holding the shell fish fresh in water, attached to the front of the bike, has made a little mark on my gates. Harry barked angrily at him and that started off Rex, who started Floss, who started Patch. Just as they barked when the High-ups' chaps came.

The bombing of the last war did not upset the houses much because they are all tough with good

foundations. Rehabilitation for some of the tenant-occupied houses that perhaps do not quite come up to scratch would be a good idea. The clever sort of thing that the LCC have so understandingly achieved in some other interesting areas of London. Just beside us, in Mill Lane, are a few little wooden houses. These, too, should be preserved for posterity. Of course, they should be painted white again, but as Jack Baker, owner of one of them, says—that would not be difficult. The London Society is particularly interested in Halifax Street and Mill Lane and sent two of their representatives to view the houses.

We had a meeting about the future of the Street, in Mrs. Baker's big room. Mrs. Baker's house is at the opposite end from the grocer's and used to be 'The Hanover Arms.' (The street used to be Hanover Street, but this was discreetly altered during the first world war.) Mrs. Baker has converted the old pub, and a very handsome dwelling-place it is, solid as a rock. In spite of the gloomy subject, we enjoyed ourselves. I fancy that the meeting was not run on the usual orthodox lines. Maybe we shall have a roaring street party if we do not have to go. An individual and hardy cross-section of the community lives in this small area. 'We are not snobs here' as Harriet Baker remarked to me when I first came. It has been my great good fortune and privilege as an artist to live with them for a few years. Every time I walk up or down the street is a new adventure. There is always some fresh aspect to notice in the architecture and the many interesting characters moving within it. Figures appear larger than life

as they open and shut the small sensible doors of the tiny houses, to appear again even larger in the windows as they draw the blinds. If the worst comes about and the Shadow is cast on us, I for one will be grateful for, and will cherish the memory of, something that was once so varied and so vital as Halifax Street.

Betty Swanwick

progress report on earlier cases

1. Uxbridge Market House Not now to be demolished. The Middlesex CC refused the application by Uxbridge BC to take the building off the scheduled list. The building is obviously not out of danger—the Georgian Group has been fighting for it intermittently for eight years—as the Council seems to regard it as coming into the 'that old thing' category. In fact it is the key to giving Uxbridge a true town centre, and as promised the bureau will be producing a scheme for this.

2. Kew Green, Surrey (lamp standards) Outrage halted. No new standards are being put up and the matter is in the hands of the Royal Fine Art Commission which—on the results of similar cases they have handled—should give a good solution.

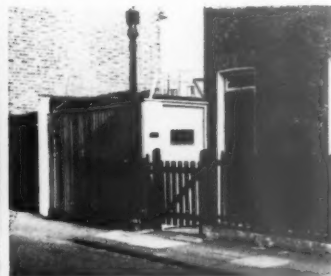
3. Edmondbyers, Co. Durham (reservoir landscaping): Public enquiry, June 10th.

Counter-attack: Halifax Street

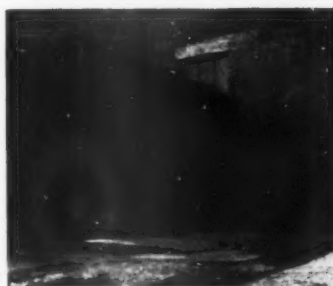
5-8, two examples of 'before and after' in Halifax Street showing how the owners have improved their property. 5 and 7, show the entrance and courtyard of no. 6 in 1950; 6 and 8 show the present state. 9, nos. 6 and 8 Halifax Street, two houses included as 'added lands' although they are not below standard. 10, a weatherboarded house in Mill Lane, condemned as sub-standard.



5



6



7



8



9



10

7. **Princetown, Devon (prison housing):** On taking it up, the bureau got 'No comment,' equivalent to saying 'why should we bother, it's only public opinion.' If public bodies won't even listen to a reasonable exposition of a reasonable point of view, just what sort of a dictatorship are we living in? This forces the conclusion that 'no comment' means no ideas—and no common sense either, because each high-handed action by a Civil Service department antagonises a few more people and even the British won't lie down under it for ever.

3. **Harefield Almshouses (proposed demolition):** (see A.R. April '57 page 221) Public enquiry June 5. The bureau will give evidence.

HISTORY

THE STOREHOUSE IN THE TOWER

*The Great Storehouse in the Tower, which was built in the first years of the reign of William and Mary, was burned down in 1841. Only the carving within the pediment survives, to the east of the White Tower. 1. The Wren Society ascribes the building to Sir Christopher and reproduces an engraving, presumably the best available for the purpose, in which, from a great distance, about half the Storehouse can be seen, the rest being blocked by the White Tower.¹ It is not clear on what authority the ascription to Wren is based. Neither the *Chronologica Series Vitæ et Actorum*² nor Elmes' *Memoirs*³ mention the Storehouse.*

From the Exchequer Accounts and the records of the Board of Ordnance it is possible both to come nearer to establishing the authorship of the design, and to see, at last, from detailed drawings of the southern elevation, exactly what the façade of the Storehouse looked like.

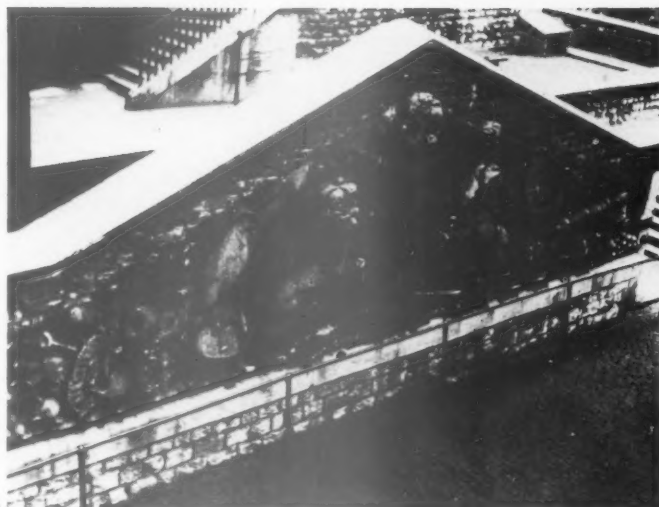
The accounts show that a contract was made between the Principal Officers of the Ordnance and Sir Thomas Fitch and John Fitch on March 29, 1688, for building the Grand Storehouse in the Tower⁴. The work must have been put in hand at once, for Robert Barker, overseer of the workmen

engaged on the new building, drew his salary from April 9, 1688, until, at length, on January 15, 1692, he received a gratuity of 20 l for his service at the Storehouse, 'being new finish'd.'

Sir Thomas Fitch died in 1689. The account of his widow, Lady Anne Fitch, and John Fitch, esq. (? their son), appears in the Declared Accounts of the Ordnance of June 30, 1692. It amounted to 13,942 l: 12 s: 3 d.⁵ In

addition to the wages of the overseer, a few items were not included in the contractor's account. Such were the expenses of John Young and John Thompson, masons 'for setting up the King's arms in the pediment,' and of Robert Bird, copper smith, 'for a copper fane, scrollles, flowerpott and globe,' and a gratuity for Henry Durden in consideration that his leg was broken by the falling of the joists. Nowhere, however, is there mention of any payment to Wren in respect of the Storehouse, either in these accounts or in his own accounts as Surveyor of the Works,⁶ though, in that capacity, he was responsible for maintenance works at the Tower. Wren's authorship of the design is not thereby precluded. For the accounts, in fact, contain no reference to the design of the Storehouse at all. It seems possible, however, that the design, though certainly in Wren's manner and in many ways reminiscent of Chelsea Hospital, is by Thomas Fitch, whose only known work is the Court House at Windsor, completed, after his death, by Sir Christopher.⁷

Among some maps and plans of the Board of Ordnance lately transferred to the Public Record Office, are five wash drawings of the front of the Storehouse. Three are to the scale of 7 feet and two of 12 feet to an inch.⁸ All appear to be dated



c. 1800 and to be exercises in architectural draftsmanship by those being trained as surveyors to the Board. 2 is signed 'J. Sedley, cadet draftsman.'

About 350 feet long and nearly 70 feet high, the Great Storehouse was an impressive building. Yet, even if not the work of Wren, it must with its red brick, its Portland stone quoins and facings, and its sculptured pediment, have had a domestic or civilian air about it that will have made it less forbidding than most military architecture. Its purpose as an ordnance storehouse is, indeed, apparent only from the two doors in the roof through which we may suppose stores to have been conveyed, by lever from the ground, in and out of the top storey.

Noel Blackiston

¹ Wren Soc. Vol. XVIII, pl. V.

² Lans. MS. 698.

³ James Elmes: *Memoirs of the Life and Works of Sir Christopher Wren* (1823).

⁴ W.O. 48/26.30.

⁵ E. 351/2677.

⁶ E. 351/3300-3304.

⁷ Colvin *Biographical Dictionary of English Architects*, p. 206.

⁸ W.O. 78/1139 and 1235.

EXHIBITIONS

My father was already a young man when the world began to think of Vermeer as one of the greatest



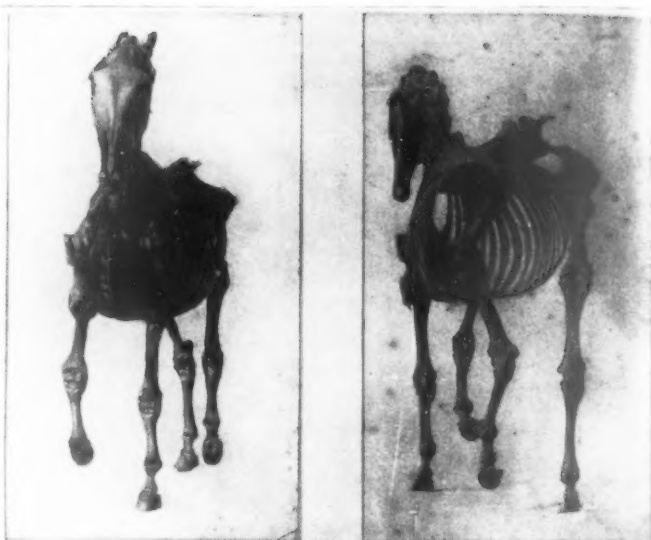
painters of all time, and I was already at school when the rumour of El Greco's mastery spread beyond the frontiers of Spain, so it is just possible that I shall live to regret the fact that I am puzzled by Basil Taylor's attempt to raise George Stubbs, England's best horse painter, to the level of Chardin and Goya.

Mr. Taylor's argument, which is set forth in the catalogue of the Whitechapel exhibition, is subtle and brilliant, but it is dependent upon the assumption that Stubbs's ingenious use of various compositional devices create informal and spontaneous effects, and it seems to me that, on the contrary, they impose an almost paralysing formality on informal situations. The Whitechapel exhibition was a remarkable display of a kind of 'home-made' neo-classicism, for which one might find suitable parallels in the art of an unimaginative master like Ingres. Although Stubbs never established vital relationships between his figures he achieved fascinating and eerie juxtapositions in some of his paintings of race horses with attendant figures; but for the most part his pictures were carefully worked-out tableaux with scenic backdrops, as in the delicious, over-sanitary *Haymakers*, 1. Mr. Taylor says, quite rightly, that one has only to compare him with Zoffany 'to see how his work avoids being picturesque or illustrative.' Likewise, one has only to look at Gainsborough's early paintings of figures in landscape to see that Stubbs rarely managed to be more than a very tidy literalist.

He was at his greatest when he was engaged upon his purely documentary drawings, and the group of studies in which he meticulously records his expert dissections of horses are among the finest

examples of anatomical demonstration in the history of art and science. Left to their own devices, these marvellous gothic machines betray their maker's dream of composure, and canter to an appointment with the Apocalypse, 2.

Nothing could be less like the Englishness of Stubbs's large, smooth, impassive pastorals than the Englishness of the small, feverish, tightly packed pastorals which Samuel Palmer painted in his Shoreham period. V. S. Pritchett's description of the English Puritan fits Palmer like a glove: his inner life 'was not only filled with dramas of power and guilt but these were exotically coloured by his reading of the Bible. He can even be said to have become too absorbing and too interesting to himself. He was living alone a life of inner violence.' It is not easy to take a balanced view of some of the tiny paintings and drawings included in the impressive exhibition of the Shoreham works recently held at the Arts Council Gallery, for they have a way of becoming tempting little hide-outs for the spirit. Palmer made them in a state of religious ecstasy; he looked at the Shoreham valley as if it were an elaborate substitute for the burning bush, dropped out of Heaven as a sign of God's love for Samuel Palmer, and when he was at the height of his hysteria he gathered all



2

that Shoreham promised him into a panel 8½ in. by 5½ in., demurely entitled *Hilly Scene*, 3, which is a kind of Ikon, filled with the signs and portents of a trysting place with God. (This extraordinary work



3

usually hangs in the entrance to the Blake Room in the Tate Gallery.)

It is customary either to ignore the eroticism implicit in the atmosphere of excited longing which charges Palmer's best work, or to dismiss it as 'literary,' and I find it a bit ironical that the stiff and inarticulate Indian paintings from Rajasthan (exhibited at the Arts Council Gallery at the same time as the Palmers) were accompanied by a boldly explanatory catalogue which contrived to place them precisely in that atmosphere of excited longing which the Palmers manage for themselves.



1



4

The Rajasthan pictures are mainly illustrations of love poems dedicated to Krishna's scandalous goings-on with the milk-maids (or cowgirls, as William Archer, who wrote the commentary, prefers to call them). Mr. Archer has just published a fascinating account of the loves of Krishna, and he has a way of making the little pictures connected with the Krishna cult seem more expressive than they are. I do not care for the rather primitive Rajasthan work, and much prefer the sweetness and sophistication of the examples of the Garhwal and Kangra schools which are on view in the new and handsome Indian galleries at the Victoria and Albert. They have a lyrical and emblematic quality reminiscent of Nicholas Hilliard's *Youth Among the Roses*. But I can more easily appreciate the creative role of iconography in Indian art when I look at the V. and A.'s collection of Indian sculpture. In a tenth-century bronze of Siva and his consort, for instance, the way the figures are seated, every position of their limbs and every gesture of their eight hands are dictated by ritual, and it would be interesting to compare Henry Moore's *King and Queen* with this piece, and try to compute the gains and losses of free invention. It seems evident, too, that rigid iconographical discipline accounts for the reti-

cence and gravity of the forms in the earlier stone-carving of Siva fused with his consort, 4.

Louis Le Brocquy has always shown great assurance in his manipulation of paint, and his textures have always had a pleasantly delicate sensuality. He is now in the midst of getting rid of his less pleasant linear mannerisms by allowing his forms to be sucked into a quicksand of white paint. His recent pictures at Gimpel Fils have been referred to as 'white Francis Bacons,' and it is clear from the example called *Young Woman*, 5, that the remark is not unwarranted, but the exhibition as a whole was an equally vivid reminder of the charming, fondant-like art of Marie Laurencin.

As it happens, the Francis Bacon show at the Hanover, where the remarkable paintings of Van Gogh going to work not unnaturally took most of the limelight, contained one of Bacon's finest paintings of male nudes, 6, and demonstrated quite as brilliantly as the Van Gogh studies his uncanny ability to intensify the 'presence' and psychic content of an image by giving his brushstrokes the kind of freedom that usually leads to the suppression of the image.

Robert Melville



6

BOOKS

THE SURVEY RE-DIRECTED

THE PARISH OF ST. MARY, LAMBETH. PART II.—SOUTH LAMBETH. (*Survey of London*, vol. XXVI). The Athlone Press, 1956. 40s.

The *Survey of London* was started in 1894 by C. R. Ashbee, one of the most original and intelligent of the followers of William Morris. It first published a few monographs on individual buildings, but in 1900 turned to the issuing of inventories with long strictly historical introductions and commentaries on London parishes. Chelsea, one of the first, took four volumes, St. Martin-in-the-Fields three, St. Pancras four, and so on. They were a blessing to local historians as well as architectural historians. The present volume is No. 26, and it marks the beginning of a new era. The Survey Committee had found after some years that production of the volumes, got up more lavishly than was necessary, was too costly to be carried on without public support. So the L.C.C. stepped in, and between 1909 and 1956 the Survey Committee (largely through the efforts of Walter Godfrey) and the L.C.C. brought out volumes alternately, the Committee twelve, the L.C.C. thirteen.

From now onwards all volumes will be the responsibility of the L.C.C. A general editor has been appointed, and he has at his disposal helpers from the Clerks' and the Architects' Departments. The result looks at first like the previous volumes, but differs from them in some notable ways. The most important difference is one for which the preceding two or three volumes had already prepared readers. The Victorian style is resolutely included. In the present volume this forms indeed the bulk of text and illustrations and

extends even into the early twentieth century. Documentation is throughout from primary sources, deeds, court rolls, newspaper articles, etc. New also is the tenor of the General Introduction with its emphasis on the growth during the nineteenth century of the areas under discussion. These areas are Kennington, Vauxhall, Stockwell, Brixton, Denmark Hill, Herne Hill,ulse Hill and Norwood. The most interesting buildings are the so-called Waterloo Churches, Prince Albert's model dwelling for workmen shown first at the 1851 Exhibition, the Oval, and Noel de Carol's great mansion demolished in 1683. No buildings of any interest seem to have escaped notice. The volume completes the parish of Lambeth and, as was pointed out officially, the first third of the Survey's programme. That is surprising and appears possible only if the City parishes no longer form part of the programme.

The jacket is handsome, but it is a surprise to notice that while it shows St. James's Park, St. James's Place, Northumberland House, the Thames and a distant St. Paul's, South Lambeth is conspicuously absent from it.

N.P.

SHAVIAN AMERICANA

THE SHINGLE STYLE. By Vincent J. Scully Jr. Yale University Press, London, O.U.P., 52s.

The Shingle Style carries the sub-title 'Architectural Theory and Design from Richardson to the Origins of Wright.' It is a history of the country house in the United States during the 1870's and 1880's, and it is devoted almost exclusively to work carried out in the eastern States, especially in the coastal resorts of New Jersey, Connecticut, Rhode Island and around the Gulf of Maine. Within the limits he has set himself the author has made an extremely thorough study of an interesting by-way of domestic architecture; the ground will be new to almost all readers on this side of the Atlantic and even to many American students.

'Shingle style' is a name coined by the author to cover American work equivalent to that of Norman Shaw and his school in this country. The absence of clay tiles and the existence of a plentiful supply of timber led the Americans to use shingles both for the roof and wall hanging, producing results that must have been a deal more attractive in execution than the pressed red tiles commonly used by Shaw himself.

The 'Architectural Theory' of the sub-title does not relate to an aesthetic theory of asymmetric composition, but rather to the influence on architects of the writings of Whitman, Emerson and others who, like Ruskin in this country, discussed aesthetics in relation to social, moral or religious ideals. The description of the Designs is meticulous, the illustrations are excellent and beautifully reproduced. There are plans and sections as well as photographs, the situation of each building is described and there are notes on the present condition of those that still exist. There is a complete index, a full bibliography and the author gives references for all his quotations.

The book is invaluable as a source of

information for the specialist, and the professional historian will be grateful for the publication of Mr. Scully's material in its present form, but it is a sad truth that a first-rate thesis is not the same thing as a readable book. In spite of its interest the general reader will probably find *The Shingle Style* exceedingly difficult to get through. The average student of architecture is unlikely to do more than while away an idle hour enjoying the illustrations, and the amateur will wish that instead of publishing his thesis the author had used his accumulated information to write a fresh essay summarising his conclusions.

Every footnote is relevant and throws light on the matter under discussion, but the distraction caused by shifting one's eyes from large type to small and back again effectively prevents concentration on the main lines of argument. One of the footnotes will certainly set the English reader thinking, for on page 112, in note 63, Mr. Scully points out that after 1880 American houses began to appear frequently in English periodicals and suggests that the possible influence of these illustrations upon Voysey and others has not yet been adequately investigated.

As far as Voysey himself is concerned I think it can be stated with certainty that he was not influenced by American or by Continental work. A study of his designs and of papers and letters, both in the RIBA collection and in private hands, clearly shows that he learned his trade from Seddon and Devey under whom he worked, and from Norman Shaw who was the architectural hero of his youth and for whom he retained a profound respect until the end of his life. Voysey seldom if ever bought an architectural magazine unless it contained a reference to work of his own, and it was his habit to paste the reference in his scrap book and pitch the remainder into the waste paper basket without more ado! The similarities between the works of Voysey and the works of some of his American contemporaries to which Mr. Scully draws attention are due to a common ancestry in the designs of Norman Shaw. From this starting point the developments were parallel but independent.

On both sides of the Atlantic the purely picturesque approach was modified, partly perhaps for economic reasons, but also in deference to theories of architectural ethics and the romantic association of Beauty with Truth. Mr. Scully quotes from Stevens and Cobb—'Now this man's work is lovely because there is instilled into it the power of a chivalrous, joyous nature, revering everything pure and brave and holy in his fellow creatures; while scorning all that is extravagant, meretricious.' The point of view, and even the choice of words, is very close to that of Voysey, expressed in lectures and essays on architecture; but here again the similarity can probably be traced to a common source in the writings of Pugin and Ruskin rather than to any contact between Voysey and his American contemporaries. But although the pursuit of a contact with Voysey seems unprofitable there may well be some American influences at work in the designs of some of the younger English architects. The houses in

Tuxedo Park by Bruce Price in 1885 have very much the spirit of later houses by Prior and Blow, and there is also a similarity between the work of Wilson Eyre in Pennsylvania and houses by Mallows and Darby in England.

Whether or not an influence on English architecture can be proved there is no doubt that the houses of the Shingle style are of very great interest and the best of them of outstanding merit. In addition to Bruce Price and Wilson Eyre, the English reader will be grateful to Mr. Scully for introducing him to W. R. Emerson and J. C. Stevens as well as for the illustrations of works by McKim, Mead and White that will surprise those who only know the later and more monumental buildings of that famous firm.

John Brandon-Jones

BREUER ILLUMINATED

MARCEL BREUER: SUN AND SHADOW. Edited by Peter Blake. Longmans, Green and Co., 50s.

Sun and Shadow stands to Marcel Breuer very much as the *Oeuvre Complète* stands to Le Corbusier, and the fact that there is five times as much of the latter as of *Sun and Shadow*, for a not so very different volume of completed buildings or furniture produced, underlines the difference between the extreme types of genius that the Modern Movement has produced.

Typically, Breuer can hardly be bothered to illustrate his un-executed projects—they appear only for the record, in the two historical surveys by Peter Blake, and occasionally to illustrate an idea or a principle. As he says in his introduction, 'Architecture . . . should not be a self-portrait of the architect,' and the same could almost be said of this book. Portraiture, as such, is left to his editor, and Breuer himself is content to talk about the way he works and thinks—his occasional use of the first person singular is far less personal than some architects' habit of apostrophising themselves in the third person. Hardly a single building is discussed at any length for its own sake, they tend to appear fragmentarily as illustrations to such themes as *Forms in Space* or *Architecture in the Landscape*.

From such an approach a personality does eventually appear, a personality which, at the second or third reading of the book, does begin to tally with what one knows of Breuer through other channels, as a designer who humanely unites within himself the functional and the romantic. This book is a valuable addition to the documentation of the modern movement, for it records not only the achievements of one of the truest sons of the Bauhaus, but also his mode of thinking and working.

P.R.B.

Books Received

ARVFURSTENS PALATS. Swedish Ministry for Foreign Affairs.
DUMPY LEVEL WORK. By James Vose. Cleaver-Hume. 9s. 6d.
OIL FUEL APPLICATION. By A. T. Henly. Crosby Lockwood.
35s.
SCHOOL CONSTRUCTION, 1955-1956. Councils & Education Press Ltd.
TIMBER DESIGN AND CONSTRUCTION HANDBOOK. By Timber Engineering Co. F. W. Dodge. \$12.75.
DRAINAGE AND SANITATION. By Blake and Jenkins. Batsford. 21s.
PRIVATE ARCHITECTURAL PRACTICE. By Maurice E. Taylor. Leonard Hill. 15s.
SMALL COMMERCIAL BUILDINGS. By Richard W. Snibbe. Chapman & Hall. 108s.



SKILL

A MONTHLY REVIEW

OF BUILDING TECHNIQUES & INDUSTRIAL DESIGN

1. bowl reflectors casting indirect light on to the fibrous plaster barrel vaults of the ceiling, which are painted matt eggshell blue.

1 INTERIORS

TEA BAR IN LOWER REGENT

STREET, S.W.1

*Designers: Misha Black and Kenneth Bayes of
Design Research Unit
Assistant Designer: John Diamond*

A room 48 ft. by 21 ft. in the basement of the Tea Centre, Lower Regent Street, had to be converted to a tea bar providing 80 seats, with standing counter space for a further 40. Although rapid service is required at peak periods it was decided to avoid cafeteria atmosphere, but to encourage customers on the whole to drink and eat in leisurely comfort and in an atmosphere emotive of Ceylon where

the fine tea served in the Colombo Tea Bar is grown.

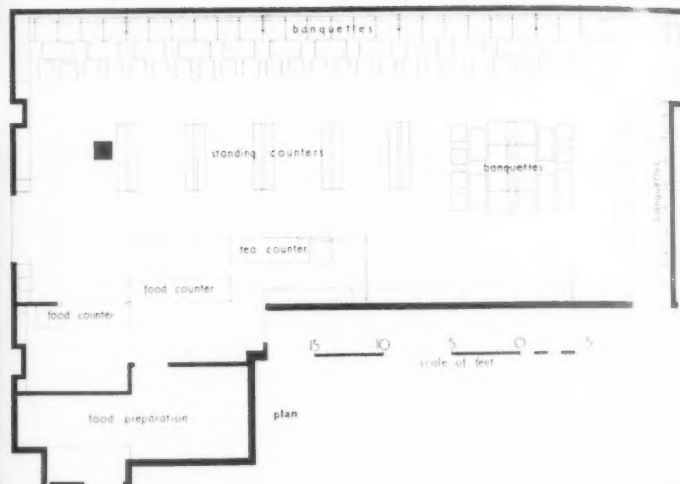
As the room is low (8 ft. under beams) an effect of increased height has been obtained between the beams by four barrel vaults of fibrous plaster closely slotted and backed with acoustic board to reduce the sound level; the cork-covered floor further improved sound absorption. The walls are panelled and veneered with Honduras mahogany. The same timber is used in the solid for furniture and other fittings. The lower portion of the ceiling towards the entrance is of timber veneered with elm, these panels continuing to form a frame round the barrel vaults. The illumination is indirect lighting from large bowl reflectors on to the ceiling barrels and direct lighting from 100-watt lamps recessed into the lower areas of the ceiling



TEA BAR IN LOWER REGENT STREET, S.W.1

and screened by specially designed aluminium baffles.

No attempt has been made to create a pastiche of the East. However, it is hoped that the colours used, the framing of counters and screens with ebonized mahogany enlivened with brass and the finely plaited cane covering the stools and screens will be reminiscent of Ceylon. 3



2, a tea-counter at which customers have their tea standing, with brass 'hour-glass' light fitting. All tables and counters are topped with matt melamine plastic decorated with a tea-leaf pattern, black on either dark green or crimson. 3, looking the length of the standing counters. 4, the 28-ins.-high tables, supported on steel columns, and banquette seating, which is upholstered in black-white fabric; on the end wall is a Cingalese dancing mask.

2



4



MOBILE DEMONSTRATION UNIT

Designers: Misha Black and William Apps of Design Research Unit

British Olivetti commissioned a mobile demonstration unit so that their typewriters and accounting machines could be shown at the numerous agricultural shows held throughout the country during the summer months.

The main shell of the unit is a standard trailer 20 ft. long and 7 ft. 6 in. wide, externally, and standing about 10 ft. 6 in. high, including the wheels; the internal height is approximately 7 ft. Both the trailer and the Land Rover which pulls it are painted externally in the buff-grey standard Olivetti machine colour with signwriting in white. When the unit is on

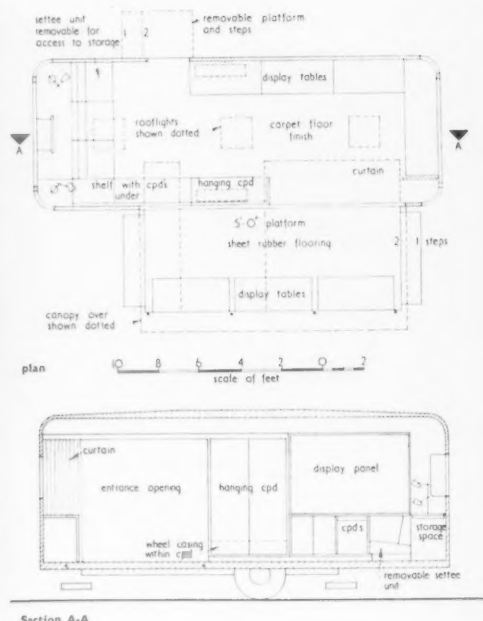
1, the Olivetti trailer and Land Rover, both painted the buff-grey standard Olivetti machine colour, ready to take the road.



site a platform, normally housed below the body, pulls out to form a display area on one side and a flap opens up to form a canopy over it. Three movable display units are then fixed at the leading edge of the platform. These units have metal angle frames, stove enamelled matt black, with infill panels to top, front and sides of formica-covered blockboard.

The demonstration tables are arranged opposite and adjacent to the entrance and again are constructed in metal angle with tops in blockboard covered with cherry red formica. The chairs are by Arne Jacobsen and have teak-veneered plywood backs and metal legs. The various cup-

2, the unit on site: the fronts to the three display units are blue, beige and yellow formica; the panel beside the entrance opening is red and the soffit to the canopy is olive green. The sign on top is red and white. 3, the interior: the settee unit has green and black upholstery and the top of the small table is yellow. During transit, the machines are stowed behind the settee.



boards and storage units are planned at the other end of the caravan. The doors of the tall wardrobe unit are covered in blue formica and those of the low cupboards adjacent to it in beige. The tops of the low cupboards and the shelf behind the settee are in red. The three sections of the settee are pulled out to give access to a large storage space where the machines are housed during transit. The upholstery of the settee units is in dark green and black. The ceiling and walls of the trailer are painted light grey, and the floor is covered with a gummetal grey carpet.

Natural light to the caravan is by the end windows and three roof lights. Lighting fittings above the demonstration tables and behind the settee are in black metal and polished brass and have black and white shades. Typographical layouts and special display panels are by Ronald Armstrong, of Design Research Unit.

SHOWROOM IN OLD STREET, E.C.1

Designer: F. M. Gross

Ferranti have leased a block of the commercial building erected by the Finsbury Borough Council in Old Street consisting of ground floor (showrooms, offices and store), three upper storeys (offices only) and the basement (storerooms), each of which has an area of 3,000 square feet. Also on the ground floor is a demonstration larder for the new Ferranti 'fridge-heater' with an





1

SHOWROOM IN OLD STREET, E.C.1

1, the showroom, looking from the entrance, where clocks and electric fires are displayed, towards the stage, on which television receivers can be viewed, with the curtain drawn across the front. The fins, right, are sycamore and the veneer on the wall to the right of the stage Honduras mahogany with U-cuts painted white. 2, typist's alcove beside stage, with inbuilt desk. The words 'sound and vision' are satin finished aluminium. 3, office on second floor with photo-murals continuing the theme 'orchestration' from the manager's office. 4, which is mahogany panelled, the chairs and settee being covered in lemon yellow woollen material.



2

adjacent tea-kitchen that serves the entire premises; the fridge-heater cools the larder and at the same time produces hot water for the tea-kitchen. In the offices on the three upper floors the partitions and the office furniture are steel; the swing-doors leading to the store departments have red rubber shock-pads fitted at the bottom.

The showroom houses three distinct sections of manufacture: domestic appliances, such as clocks and electric fires; television sets; and radios and radiograms. Two of the show windows are open at the back giving a free view into the room from outside; the backs of the two remaining front win-



3



4

dows are partly closed to allow the erection of raised demonstration parts in the showroom. Slanting panels, carrying television sets, are veneered in aromatic cedar and are decorated with interrupted squares of pastel shaded colours carrying wire-sculpture; elsewhere the wall panelling is veneered Honduras mahogany and pearwood. A small stage, with an electrically-operated curtain, patterned with representations of cathode tubes and valves, and the firm's trade mark, enables television receivers to be viewed in semi-darkness without other visitors being disturbed. A floating ceiling contains reflectors and spotlights for lighting the displays.

2 DESIGN REVIEW

FOOD PREPARATION EQUIPMENT

This article reviews current small hand and powered kitchen equipment which has begun to rival in quality the equipment of the dining room.

The smaller hand equipment used for preparing food – cutlery, mixing bowls, saucepans and so on – have changed little in form and purpose over the years. Though new materials have extended their variety and usefulness, many of them have strong traditional associations and designers' efforts have been concentrated mostly on refinements of shape and on details of colour and finish. Cooking pots and kitchen tools are no longer things to be hidden away in dark cupboards but are as proudly displayed on kitchen shelves as were the objets d'art and heirlooms in grandma's china-cabinet. The link between kitchen and dining room is made more complete when the casserole can come from the oven to take its place among the plates and dishes of the dining table. For many years the Scandinavians have pointed the way in decorated oven-proof earthenware and, more recently, in enamelled cast iron; they still have few rivals.

The powered appliances, however, reflect a change not only of method but also of purpose. Kitchens are evolving in two directions which at first sight seem mutually antagonistic. On the one hand there is a marked trend towards integration of storage components and major appliances; on the other, a tendency towards disintegration of the functions once concentrated in the kitchen but now gradually spreading over the rest of the house.

If each function is considered on its own merits and a piece of equipment designed to fulfil that function, then the multiplication of kitchen gadgetry can be endless. This, in fact, has been occupying the attention of American appliance designers for some time, and already the kitchen of the future is seen as a well-knit, compact nerve centre from which various mobile units can be brought out to perform their duties at the required time and in the required place. Thus, in the long run, integration and disintegration are not opposed but are complementary aspects of the same idea.

In this country, the electric toaster and coffee maker represent the unplanned, embryonic beginnings of this process. Powered tools, such as mixers, belong essentially, however, to the kitchen and though most are made as separate machines, they could well be considered as an integral part of larger kitchen fitments. The prospect of growing numbers of these individual appliances suggests that new thought must be given to their place in the home, for disintegration is no virtue in itself.

hand equipment

The visual appeal of this type of uncomplicated equipment depends primarily on a simple and direct statement of form combined with the devotion of much care to seemingly unimportant details. Careful finish, and clever use of colour or texture contrasts, can give a greater sense of quality than any extravagance of shape, for this type of article

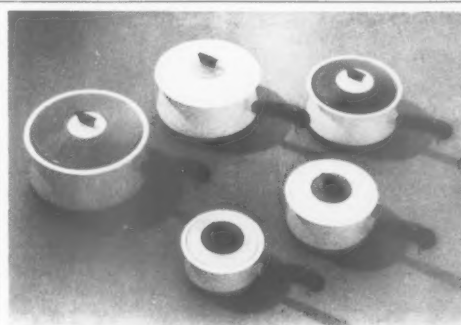
does not lend itself naturally to styling gimmicks. The quality of the material, the shaping of handles and knobs and the avoidance of protruding edges all contribute to higher design standards with a result that the best designs tend to be expensive.

Brightly coloured enamelware has a place in most people's homes, but in recent years has tended to be replaced more and more by aluminium and stainless steel. A new lease of life has been given, however, to this traditional

although expensive, offer a permanence and resistance to staining hard to find in any other material. The 'Prestige' pans, 3, are well detailed and have lids which fit snugly without binding. The kitchen scissors, 4, by the same firm, also in stainless steel, show a similar attention to detail in the careful shaping of the handles.

Several makes of kitchen cutlery and other tools with wooden or plastic handles have introduced a new type of austere grace to the kitchen. The deeply serrated knife-blade in 5 gives a tough visual equivalent of its efficient action.

Much of the best kitchen pottery does not attempt to rival the refinements of dining tableware but derives its visual appeal from an acceptance of its more robust purpose. In the 'Lord Nelson Ware,' 6, over page, the restrained pattern defines the shapes without



1, 3 enamelware 1, enamel saucepans, made by Jury Holloware Ltd. Prices: £1 13s. 6d. (1 pint); £2 8s. 4d. (6 pints). 2, 'Colorama' saucepans, designed by Carmela Rossini; made by the Mirroware Company Ltd. Price: £5 19s. 4d. (3 saucepans and frying pan). 3, 'Prestige' frying pans, by Prestige Group Ltd. £2 9s. 6d. – £3 17s. 6d.



cutlery 4, 'Prestige' scissors, made by the Prestige Group Ltd. Price: £1 5s. 5, kitchen cutlery, made by Noedlam, Veall & Tysock Ltd.



material in the brightly coloured 'Jury Jetware,' 1, where new shapes have been developed which retain something of the comfortable sturdiness usually associated with enamelware. Colour has also been used to enhance the simple elegance of the 'Colorama' aluminium saucepans, 2, whose smooth unbroken contours and slim handles set new design standards for this type of equipment. A few British stainless steel saucepans have been appearing in the shops recently and,

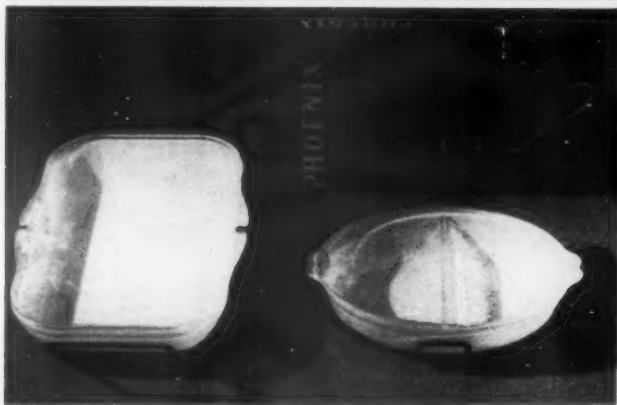
obtrusion. The shape of the 'Denby' casseroles and vegetable dishes, 7, seem to owe much to a peasant tradition, although the smart black and white colouring makes its appeal to a more sophisticated market. In oven glass the quality of the material itself contributes to the design and considerable research has been carried out in recent years to improve the clarity. In the 'Phoenix' dishes, 8, where white opal glass has been used, the black wire stands contrast well, and also serves

6,7



**kitchen
pottery**
6. 'Lord Nelson' Ware
made by Eljah Cotton
Ltd. 7. 'Devon' by
casserole and vegetable
dishes, made by Joseph
Bourne & Son Ltd.
Prices: 9s. 11d. -
11s. 6d.

8,9



oven glass
8. 'Phoenix' oven glass
designed by Arthur
Brook, and made by the
British Heat Resisting
Glass Co. Ltd.
Price: 18s. 5d. and 19s. 8d.
9. polythene mixing bowl,
made by Jarret, Rainsford
and Laugh-ton Ltd.
Price: 4s. 2d.

powered equipment



11, food mixer made by Kenwood
Manufacturing Co. Price: £45



12, food mixer
made by
Valmade Ltd.
Price: £5 12s.

a practical purpose in holding the hot dish clear of the table top. The use of plastics for numerous types of kitchen utensil has increased rapidly during the past year or so and provide welcome splashes of bright colour. The malleable qualities of polythene have many practical advantages and the 'Twinco' mixing bowl, 9, shows how the material can be adapted to new purposes, in this case pouring. The ease, however, with which the surface can be scored calls for the use of less harsh mixing tools.

An approach to the design of rolling pins can be seen in 10, which shows a functional

development from the traditional wooden article and differing characteristics of form, resulting from the material used.

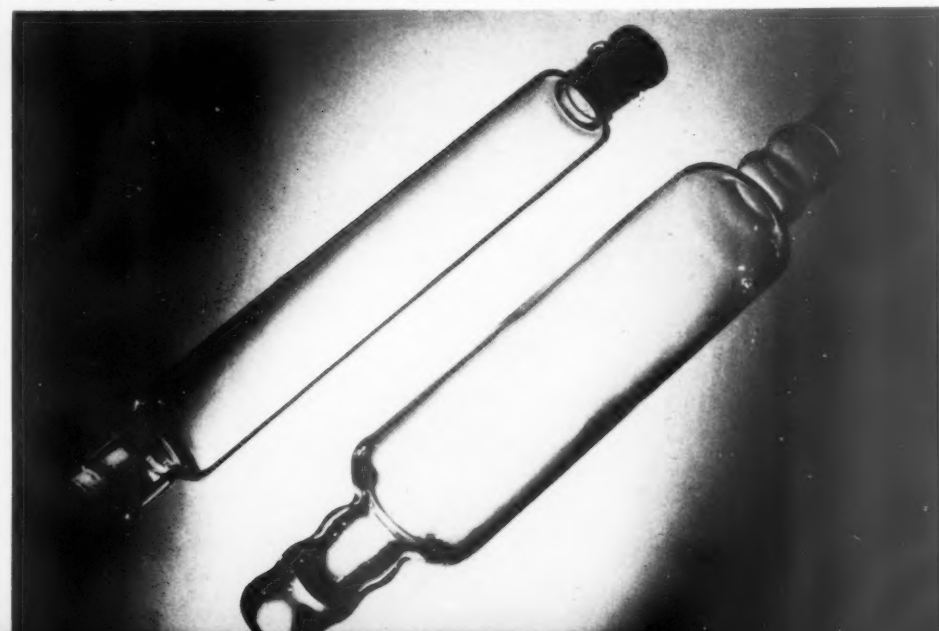
powered equipment

The wide varieties of powered tools for food preparation have no long-standing traditions to limit the designer's freedom. These tools are a machine age product which require a machine aesthetic.

The 'Kenwood' mixer, 11, which can be fitted with accessories for mincing, potato peeling, juice extracting, etc., gives a similar visual satisfaction in its smoothly flowing

[continued on page 463]

rolling pin 10, 'Pyrex' rolling pins, designed by John Cochrane
and made by James A. Jobling & Co. Prices: 9s. 3d. and 9s. 7d.



forms and in the contrast of the white-painted basic unit and metal bowls and fittings. The hand-held machine, 12, expresses its simpler purpose in a more compact arrangement, the casing over the mechanism forming a handle that allows good control.

Much equipment of this type has given

rise to excesses of the stylist's art; but manufacturers are slowly beginning to realize that a more discriminating public derives less satisfaction from exaggerated speed-lines and applied ornament than from forms and finishes that look efficient for the job they have to perform.

3 TECHNIQUES

TIMBER ENGINEERING

by Lance Wright

WHAT THE T.D.A.'S NEW DISPENSATION MEANS TO ARCHITECTS

In the long run the extent to which architects use new techniques depends on how easy it is for them to do so. For a long time we have been hearing about the virtues of calculated timber structures, of glued lamination and of long span framed and connected trusses; but most of us have put off using them because we are not sure how to get the calculations done, or which firms can be relied upon to do the work. This month's technical article describes and comments on a scheme which has been put in operation by the T.D.A. to iron out these very practical difficulties.

Before an architect can make use of a new technique involving intricate calculations he has to ask himself a number of questions. Who is going to make the calculations? How is he going expeditiously to compare the cost of using the new technique with that of using the old—and indeed with that of using some other material altogether? And who can be relied upon to carry out the work?

Up to now the answers to these questions when applied to calculated timber have been, to say the least, equivocal. Structural Engineers who might have been expected to design in timber as readily as in any other structural material, have in fact lacked experience and in the main have shown themselves unwilling to obtain it; while architects need not be reminded of what happens when they ask joinery manufacturers to quote for something they are unprepared for: of the high tenders and the uncertain results.

To overcome all of these inhibiting factors, the Timber Development Association have set up a new system. This falls into two main parts, corresponding to the two main problems. First they have evolved a design* service which has as its end the preparation for architects of sufficient structural working drawings and specifications to enable them to use the new techniques to the best advantage and to get fully competitive tenders. In addition they have issued a 'live' list of approved manufacturers for each of the major techniques of timber engineering so that architects may know whom they may safely ask to tender for each kind of job.

the design service

Architects are rightly suspicious of any commercial organization which offers a design service. Partly because they consider that they themselves ought to be doing any 'designing' which has to be done, but chiefly

because they find that in accepting such a service they are committing the client to a scheme of which they can appraise neither the design merits nor the price. Concerning the first objection we must reluctantly admit that in the last ten years or so timber technology has become a specialist subject; even the well informed architect cannot make the best of it on his own. To consider the TDA's offer in the light of the second objection it is necessary to describe the machinery of the scheme they propose.

When an architect goes to the TDA with a problem of timber design requiring more help than the limited advice the Association still offers free of charge, he will be given a choice of two alternatives. It will be suggested to him either that he should approach one of the independent design consultants on TDA's list, with whom he can make his own arrangements as regards fees and services, or that he should apply to one or more of the TDA 'Approved Manufacturers.' If he takes the latter course he again has two alternatives. Either he can follow the usual procedure and ask these manufacturers to prepare their own designs (assuming that they have their own staff to do it) adding merely that he wishes these designs to be checked by the TDA. Or he can ask one of them to obtain for him a TDA design, complete with drawings and specification, and on receipt of this design may use it to obtain competitive tenders from as many 'approved' manufacturers as he may think fit. (He may, if he wishes, send the design to other firms, but then he would no longer be enjoying the full protection of the scheme.) The main interest of the scheme lies in this last alternative, since, if the architect adopts it, he will be under no particular obligation towards the firm who procured the design for him, because, as we shall see, the cost of preparing the scheme will (apart from a nominal fee) fall not necessarily on him, but on the successful tenderer. When the TDA send the design to the manufacturers who asked for it they tell them at

the same time how much they should add to their prices to cover the charge which the TDA would have to make to the successful tenderer to cover the cost of the design. On being asked to submit a tender to a TDA design an 'approved' firm is obliged to inform the TDA who in turn will tell him what design charge he must make—but not what his total price must be!

For the architect, the points to notice about this procedure are first that it relieves him from any sense of moral obligation towards the manufacturer whom he first approached on the score that he has 'put him to special trouble' and has 'picked his brains'. Second, that the design which he gets will not have been prepared with any manufacturer's convenience particularly in mind. So often when he goes to a specialist sub-contractor the architect is made to feel that the resulting design owes its form more to the fact that the sub-contractor had a large stock of some material which he wanted to dispose of or to some like fortuitous circumstance.

than to the merits of the case. Here, however, he can be reasonably sure that he is getting as good and as economical a design in timber as he is likely to get by any other means. What he will not get, of course, is a wholly unbiased opinion on whether timber is the right material in any given case; though in fairness we must add that TDA has not got the reputation for advising the use of timber in unsuitable circumstances. It would clearly be contrary to its policy and interests to do so.

the list of 'approved manufacturers'

The list of approved manufacturers is divided into four categories according to the four main classes of technique which are practised in timber engineering. These four categories are: (i) the use of mechanical connectors (e.g. calculated nailing, timber connectors, shear plates, etc.), (ii) glued frameworks, (iii) plywood assemblies, and (iv) glued lamination. These are of different orders of technical difficulty and require different equipment. It is interesting to notice that, at the time of writing, there are 62 manufacturers in the first category, 33 in the second, 30 in the third and 19 in the fourth. Though, by the time of publication, these numbers may have slightly increased, they give a good indication of the present technical strength of our timber manufacturing industry. It is of some interest to mark, for instance, that only about one third of those firms which can cope with mechanical connectors can at present cope with glued lamination.

The list also gives the regions in which each firm is prepared to operate and we understand that the TDA has further agreed with the firms the maximum size of job which each can undertake. In order to be placed on the list, firms have to state the equipment they possess, to quote examples of the work they have done and to be subject to an inspection; and in order to remain on the list they must renew their registration every year.

This question of maintaining workshop standards is particularly vital in timber engineering, since the comparatively high stress it permits can only be realized if the work is carried out with the greatest precision and, where glueing is involved, sometimes within narrow time and temperature limits. Unfortunate experiences in Germany have in fact



1, the use of timber connectors to effect the eaves joint on a framed and bolted truss.



2



3

2 and 3, the technique of timber lamination (top and above) to provide large scale structural members is still comparatively uncommon in this country. As yet only 19 firms are 'approved' for this class of work.

compelled the public building authority to confine the glueing of structural timbers to firms which have received a licence. The registration of approved manufacturers by TDA offers similar guarantees.

work on site

It is one thing to obtain a design and a tender, another to get the parts made in a factory and a third to get them erected on site. Some timber manufacturers do their own erection, in which case they take full responsibility and, for the architect, there is no problem. As all do not do this and as it is quite possible for all the good work done by the manufacturer to be set at naught by a general contractor who does not appreciate the finer points—and for responsibility to fall somewhere between the two—a scheme is now being considered whereby approved manufacturers who do not do their own erecting can themselves appoint a number of 'approved' sub-contractors who will erect for them and for whose work they will accept responsibility.

This arrangement if put into practice should roll away the last obstacle which at present still prevents the architect from using timber as he ought.

conclusion

Throughout this description, we have been concerned mainly with the contractual aspect of the TDA's scheme since this has seemed the most important; and apart from pointing out that timber engineering

calculations are generally 'beyond' the architect, we have said nothing about what should be his contribution to timber design and nothing about whether this new dispensation is likely to help him to make it.

The difficulty of any architect's specialist relationship is to know how the two can start off on a design together: 'early consultation' is something we hear about so often but, through force of circumstances, practice so little. From the point of view of this relationship and apart from glued laminated construction (which is a self-contained mystery), timber engineering has the advantage that its intricacies are mostly confined to jointing: its main achievement is precisely the evolution of jointing methods which enable the designer to use to the full the strength which has always resided in the main timber scantlings.

For this reason the architects' non-specialist knowledge carries him further towards understanding with the specialist than is the case with other branches of engineering. From the technical side, therefore, there is every reason to expect the comparatively rapid maturing of an accomplished architecture using the 'new' techniques. It is for this reason that the forming of the right professional/commercial relationship is so important. The success or failure of any contractual system depends on whether it can bring the architect and the specialist into one another's presence without duress on either side. On whether it can bring about a situation in which neither feels

that he has a professional mystery or a commercial interest to conceal. It is notorious that where steel and concrete took wings and flew out of the architects' competence, the current professional and commercial relationships made it virtually impossible for the architect to carry on a fruitful dialogue with the specialists, with results which were to

the advantage of nobody. The indications are that timber is going to be more fortunate as an engineering material and that the TDA has struck on a set of professional and commercial relationships, which will not only cause timber to be used more often than it otherwise would, but with greater knowledge and sensibility.

4 THE INDUSTRY

Floor Channels

There is no surer evidence of the slow but steady increase in architect influence in building than that provided by items of standard hardware. A good example of this is the new 'Florline' half-round channel now marketed by Broads. Up to now the trouble with channels has always been that, if you want them to finish flush with the floor, you must always put up with the sight of the socket doubling up behind the spigot at each joint. By the simple expedient of stopping off the socket just below the finished floor surface this piece of clumsiness is removed for ever.

Broad & Co. Ltd., South Wharf, Puddington, London, W2.

All-Purpose Framing

The various meccano sets which have come on to the market, mostly to solve the problem of flexible storage in warehousing, have generally had a bad press from architects because in order to serve every possible use they have had to cast appearance to the winds. Any meccano set which provides flexibility by a regular sequence of holes is always going to look what it is—a convenient substitute for thinking; and it is quite evident that no such gimmick can have anything to do with architecture.

Unistrut, which is the subject of this note, serves the purpose of these meccano sets better than any of them, if only because the system of connection depends not on the penetration by a bolt of one of a series of holes, but on a spring clamp running in a channel. It is also immeasurably better looking. The

basic channel section is made in two sizes: 1½ in. by 1½ in. and 1½ in. by 1¼ in., the former being in 12, the latter in 16, gauge cold rolled steel. The strength of the resulting sections and their form make them suitable not merely for such items as racks and temporary structures, but as electrical trunking; and it is interesting to notice that in America (vide *The Architects Journal*, January 1, 1957) channel sections are welded together back to back to form the load-bearing structure of buildings. The picture below, left, shows a length of Unistrut to which fixing lugs have been welded for the purpose of casting into an *in situ* concrete wall, while the picture below, right, shows an application of this to provide movable wall bracketing in the BBC Television Centre, Wood Lane.

Unistrut Division of Sankey-Sheldon Ltd., 46, Cannon Street, London, E.C.4.

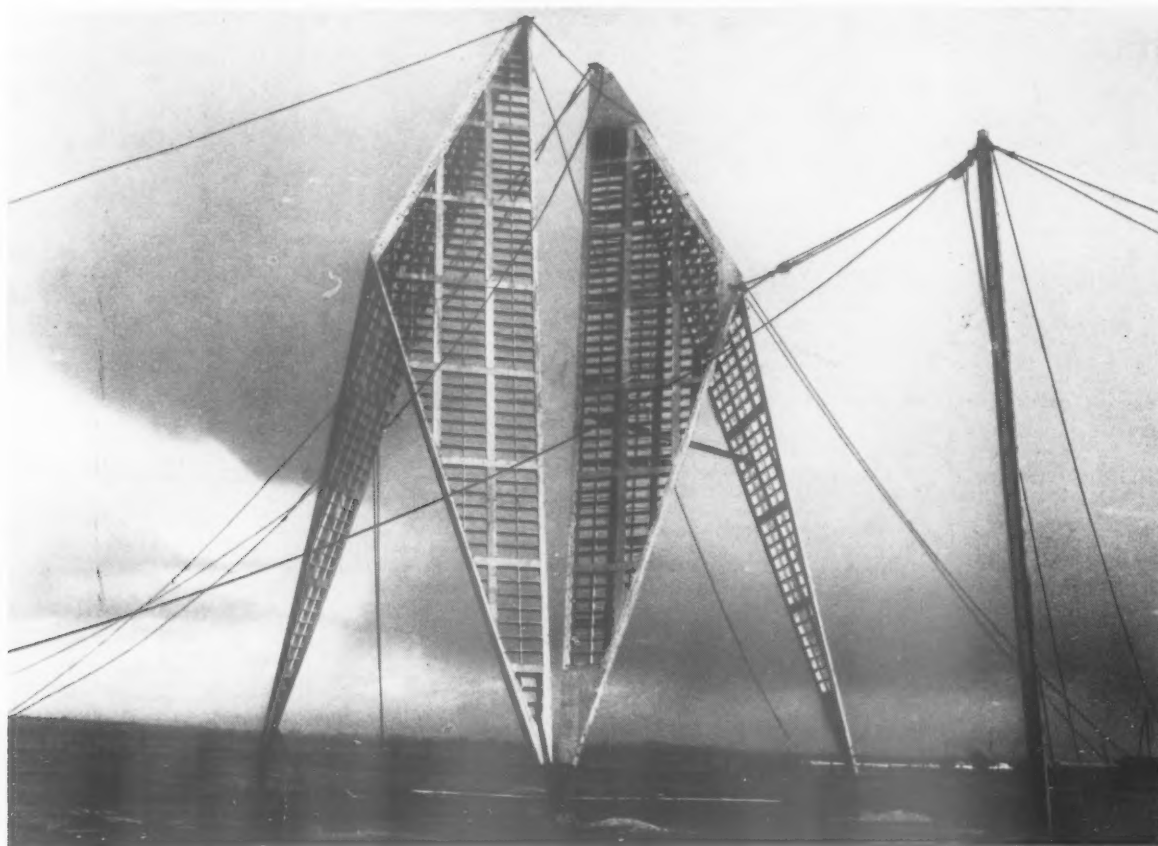
Lightweight Aggregate

The Cementation Co. Ltd. announce that they are now marketing a new lightweight aggregate named 'Terlite' which is manufactured from the pulverized fuel ash extracted from the Battersea Power Station. Though as yet only available in the London area, the Company are hoping shortly to develop plant in other centres up and down the country. This is good news, both because it is always comforting to hear of new commercial uses for our embarrassing stocks of pulverized fuel ash, but also because the ready availability of lightweight aggregate is necessary for the full exploitation



Left, photographic montage showing method of effecting a right angle joint in Unistrut. The bolts are spring loaded. Right, photograph showing a pipe bracket secured to a length of Unistrut used as an *in situ* duct in concrete.

[continued on page 466]

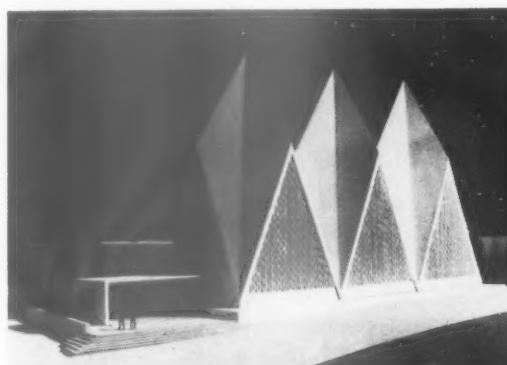


Crystalline Hall • British Government Pavilion • Brussels 1958

One of the most striking features of the Brussels International Exhibition in 1958 will be the Crystalline Hall—entrance to the British Government Pavilion—with its three great crystal-shaped spires 70 feet high. Architects: Howard V. Lobb & Partners, F.F.R.I.B.A. (Consulting Engineer: Felix J. Samuely, B.Sc.(Eng.), M.I.C.E., M.I.Struct.E.). These unusual structures are being pre-fabricated by Rainham Timber Engineering Co. Ltd. Shown above is a trial assembly of four "egg-crate" panels, eight of which form one spire. The perimeter structural members are of Glued Laminated Timber. The difficult job of precision machining these large pieces (74 feet long) for a perfect fit was accomplished with complete success.

Other R.T.E. contributions to this Pavilion are the outside wall coverings of the Hall of Technology—a series of four-sided flat pyramids made of plywood—and the V.I.P. Hall which is a smaller construction similar to the Crystalline Hall.

R.T.E. are also responsible for the special Timber Curtain Walling incorporated in the British Industries Pavilion at the Exhibition, which will give the Pavilion four glass walls of approximately 60,000 sq. ft.

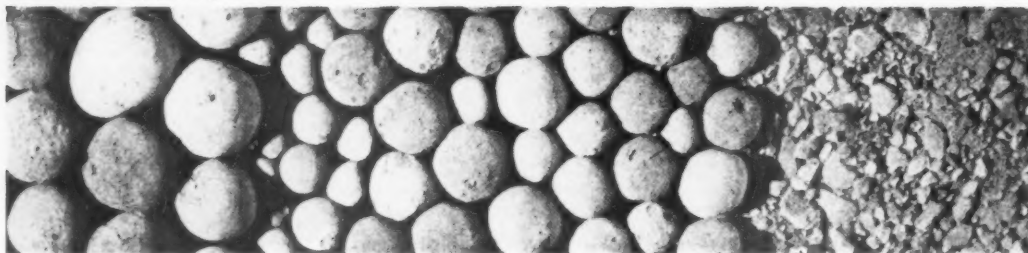


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At the time of writing Terlite is only available in its original aggregate form, but it is presumably only a matter of time before it is taken up by the manufacturers of building blocks and of precast concrete floor and roof slabs. It is available in three grades, $\frac{3}{4}$ in., $\frac{1}{2}$ in. and $\frac{1}{16}$ in. down (which we illustrate to actual size, above). Typical weight strength ratios of concretes made from these aggregates are:

weight: 68 lb. cu. ft.; mix: 8 : 1
no fines mix; crushing strength:
600 lb. sq. in.

weight: 88 lb. cu. ft.; mix:
3 : 2 : 1 graded mix; crushing
strength: 3,000 lb. sq. in.

Concrete made this way can be nailed and cut and is reckoned to save 40 per cent dead load in structures where it is used.

The Cementation Co. Ltd., 20, Albert Embankment, London, S.E.11.

New Lighting Catalogue

Architects are deluged with light-

ing catalogues these days, many of which achieve a high standard of typography. A recent addition is that of Courtney, Pope (Electrical) Ltd., an off-shoot of the firm of shopfitters. Though this lapses occasionally into those 'artists' impressions and general photographs of lighted interiors which architects can do without, the facts are presented in a businesslike way: photograph, dimensioned diagram, brief description and (once you understand the method) easy reference to the price. Doubtless because of the shopfitting connection the range is fuller than most, particularly in the tungsten spotlight, recessed and semi-recessed ceiling mounting sectors, and there is a welcome suggestion which crops up in several places that the architect can obtain modifications to the patterns at small extra cost.

Courtney, Pope (Electrical) Ltd.,
Auhurst Park Works, Tottenham,
London, N.15.

Cellular Rubber Flooring

The field of comparatively ex-

pensive floor finishes for use in places where sound is very important and wear is hard is now enriched by the availability in this country of the 'Bulgomme-Silence' rubber floor. Manufactured at Roubaix, Bulgomme-Silence has been a staple flooring of continental cinema foyers for twenty years and more. It consists of a hard, smooth upper wearing surface of high quality natural rubber bonded to a thick cellular latex cushion with a fabric interliner between. This gives an easily cleaned surface which is almost indestructible by wear and which is probably as silent in use as any smooth surface can ever be. Costing between 60s. and 65s. per sq. yd. supplied and laid, it is made in the usual mock-tile and mock-marble finishes; but it is also made in a range of plain colours, several of which are exceptionally good.

Burlain Ltd., 16, Sheldon Street,
London, W.2.

Forced Pipe Circulation

Though it is not the business of the architect to design heating

installations for large jobs, it is to say the least, very handy if he can do so for jobs which are too small to carry the expense of an independent heating consultant. Unfortunately the information enabling him to do this is hard to get and usually harder still to understand. For this reason we welcome a booklet published by Sigmund Pumps Ltd. (price 3s. 6d.) entitled *The Principles of Forced Circulation in Hot Water Heating Systems* which explains clearly how to 'size' a small installation, radiators, pipes, pump and boiler; and gives sufficient tables and data. Though mention is made of the 'small pipe' system, full data is given only for traditional pipe sizes (i.e. 1 in.-2 in.). In general there is no doubt that the improvement in small pumps in recent years, and the consequent feasibility of forced as against gravity systems, has much encouraged the use of central heating in small houses and that a reference of this kind would be very useful to those who do this class of work. The booklet is obtainable from *Sigmund Pumps Ltd., Team Valley Trading Estate, Gateshead 11.*

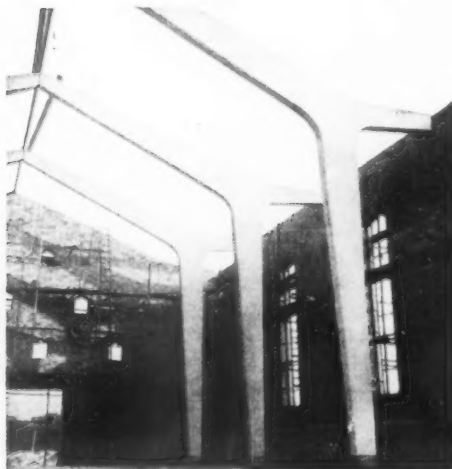
Factory Insulation

Whether Gerald Nabarro's Private Member's Bill to enforce standards of roof insulation in factories is law or not by the time this note is read, the facts which its debate has elicited should make it impossible henceforth for the architect-designed factory to fall short in this respect. In any event one useful by-product of the Bill has been its stimulation of all manufacturers of roofing materials and the motive it has given them for re-examining their products.

[continued on page 468]

WOODWELD GLUED TIMBER CONSTRUCTION PORTAL FRAMES

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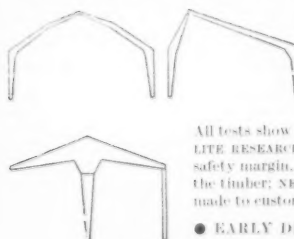
(above) WOODWELD PORTAL FRAMES of 52ft. span being used in a Rochdale building. (January '57).

(top right) WOODWELD PORTAL FRAMES used in construction of a Church at Oldham, Lanes (December '56).



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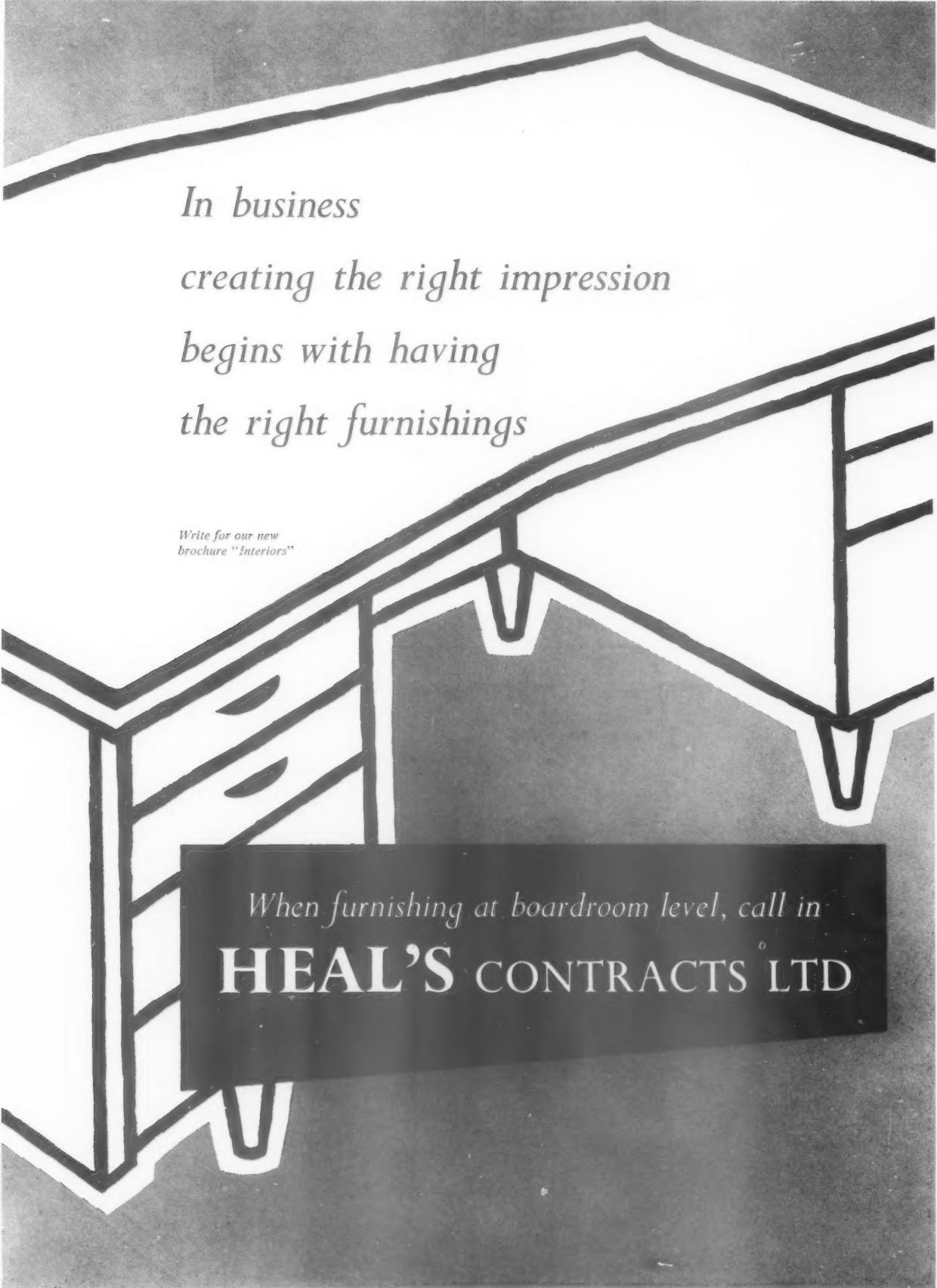


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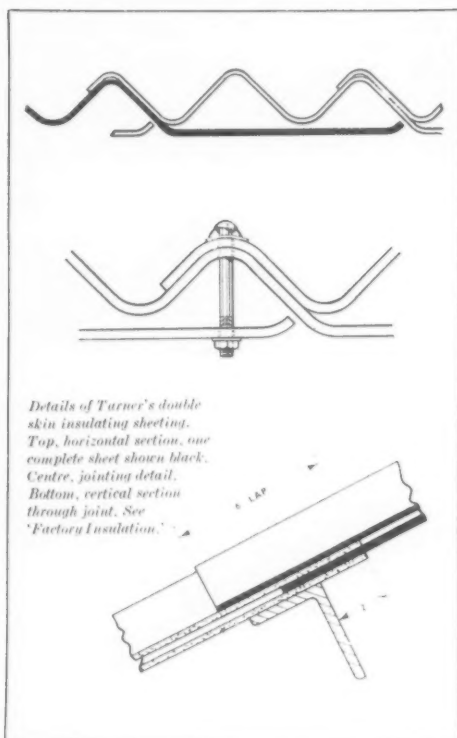


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Details of Turner's double skin insulating sheeting. Top, horizontal section, one complete sheet shown black. Centre, jointing detail. Bottom, vertical section through joint. See 'Factory Insulation.'

continued from page 466]

Asbestos cement is a strong competitor for this new market and it is interesting to notice that Turners have been incited to produce a new vocabulary of sheeting

he will use only when its practical merits compel him. They often do.

Turners Asbestos Cement Co. Ltd., Trafford Park, Manchester 17.

entitled 'Large span combined sheets' which consist essentially of large flat sheets, 3 ft. 5 in. wide, part corrugated, part flat. These interlock in the manner of a tile, the corrugations forming a continuous corrugated roofing and the flat sections forming a tray beneath to hold insulation—and, of course, a flat surface when seen from below. This roofing is designed to allow purlin spacing at 7 ft. 6 in. centres and five different roof pitches ranging between 5° and 15° from the horizontal. It is, of course, the extras—the barge boards, the eaves fillers and the flashings—which make or (more commonly) mar asbestos cement sheeting. There are signs that these are becoming a trifle less ungainly as the years go by, but they still fall short of the standard reached by the Germans. Asbestos cement sheeting still remains, for the English architect, a material which

CONTRACTORS etc

Housing at Golden Lane, London.
E.C. Architects: Chamberlin, Powell & Bon. **General contractors:** George Wimpey & Co. **Contractors (for sub-structure):** Griggs & Son. **Sub-contractors:** Shuttering: Scaffolding (G.B.) Ltd. **Reinforced concrete:** Helical Bar & Engineering Co. **Sanitary fittings:** Adamsez Ltd. **Acrow units:** Acrow (Engineers) Ltd. **Joinery:** Austins of East Ham Ltd. **Plywood:** Bambergers Ltd. **Reinforcement:** B.R.C. Engineering Co. **Joinery suppliers:** Boulton & Paul Ltd. **Refuse chutes and manhole covers:** Broads & Co. **Sash cramps:** Buck & Hickman Ltd. **Slate larder shelves:** Bow Slate & Enamel Co. **Carcassing timber:** Burt, Boulton & Haywood Ltd. **Taps:** Barking Brassware Co. **Fabricated steelwork:** Clark Engineering Co. **Stair treads:** Costain Concrete Co. **Steel railing:** Clark Hunt & Co. **Sheet and cast iron railing:** Carron & Co. **Metal windows:** Crittall Manufacturing Co. **Lightning conductors:** R. C. Cutting & Co. **Heating and plumbing:** Ellis (Kensington) Ltd. **Lift installations:** Express Lift Co. **Garage doors:** Esavian Ltd. **Lathing:** Expanded Metal Co. **Compounds and expansion jointing:** Expandite Ltd. **Glazing:** Faulkner Greene & Co. **W.C. cistern:** Fordham Pressings Ltd. **Wallboard:** Gabriel Wade & English Ltd. **Flooring:** Great Metropolitan Flooring Co. **Floor tiling:** R. H. Griffin. **Pavement lights:** John Healey (London) Ltd. **Resinoid flooring:**

Haskell Robertson Ltd. **Roller shutters:** Haskins Ltd. **Steel:** T. Jones & Co. **Plywood:** London Plywood. **Common bricks, sandfacing, rustics:** London Brick Co. **Domes:** Leaderflush Ltd. **Paints:** W. & A. Leigh Ltd. **Glazed bricks:** Lewis Fireclay Co. **Fosasil bricks:** Moler Products Ltd. **Scaffolding:** Mols Scaffold Ltd. **Laminated timber flooring:** Master & Andren Ltd. **Prestressed concrete products:** Joseph Mears Ltd. **Thermoplastic flooring:** Marley Tile Co. **Fire resisting doors:** Mather & Platt Ltd. **Scaffolding:** Norstel Scaffolding & Hire Ltd. **Asphalt:** Prater Asphalt Co. **Prestressed concrete roofing:** Piershead Ltd. **Roof domes:** Pilkington Brothers Ltd. **Window and uniting:** Quicktho (1928) Ltd. **Ironmongery:** A. G. Roberts & Co. **Sanitary fittings:** Rownson, Drew & Clydesdale Ltd. **Shuttering:** Rapid Metal Development Ltd. **Leca blocks:** J. H. Sankey & Son. **Wood wool slabs:** W. F. Schlesinger & Co. **Sanitary fittings:** Stitsons Sanitary Fittings Ltd. **Steel partitioning:** Steel Bracketing & Lathing Co. **Teak draining boards:** J. Styles & Son. **Reinforcement:** Twistell Reinforcement Ltd. **Paving:** Roman Art Terrazzo Paving. **Wall tiling:** Teuton Davis & Bennett Ltd. **Waterproofing liquid:** Tretol Ltd. **Flue pipes:** Universal Asbestos Co. **Glazing:** Williams & Williams Ltd. **Purpose made windows:** Wainwright & Waring Ltd. **Joinery:** J. R. Welch & Co.

Museum at Accra, Ghana. **Architects:** Fry, Drew, Drake & Lasdun. **General contractors:** de Santos Ltd. **Sub-contractors:** Terrazzo paving: Terrazzo Products. **Electrical:** Drake & Gorham (Contractors) Ltd. **Aluminium dome**

[continued on page 470]

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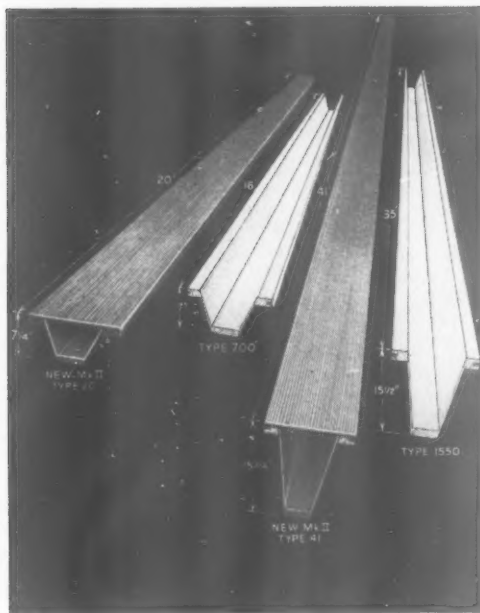
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Marlowe Road London E 17



TIMBER ENGINEERING AT IT'S BEST

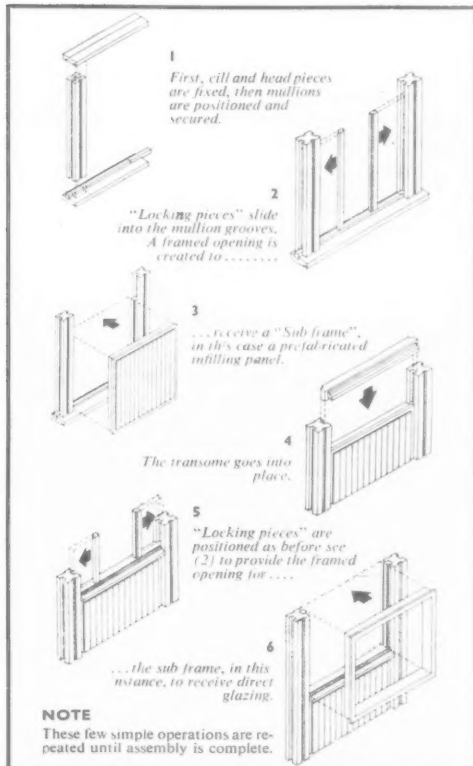


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and supports: Aluminium Construction Co. Aluminium louvre frames: N. V. Appleton Pty. (Australia). Roofing felt: D. Anderson & Sons. Ironmongery: A. G. Roberts Ltd. Lightning conductors: R. C. Cutting & Co. Paint: Blundell, Spence & Co. Snowcem: The Cement Marketing Co. Sanitary fittings: Shanks & Co. 'Asbestolux' dome lining: The Cape Asbestos Co. Rainwater goods: Vitreflex Ltd. Perspex dome roof lights: William J. Cox Ltd. Gallery flooring: The Marley Floor Tile Co. Turnstiles: W. T. Ellison & Co.

Offices at Kingswood, Bristol. Architects: Leonard Manasseh & Partners. General contractors: Works Department, Frenchay Products Ltd. Sub-contractors: Special roofings and roofing felt: William Briggs & Sons. Tiles (floors, etc.): Langley London Ltd. Glass: Pilkington Bros. & Chance Bros. Patent glazing and curtain walling, casements and signs: S. Warner & Son. Structural steel: Matthew T. Shaw & Co. Waterproofing material: Alexander Maxwell & Co. Electric light fixtures: George Forrest & Co. Electric light fixtures and heating: General Electric Co. Plumbing: Econa Modern Products Ltd. Door furniture: J. D. Beardmore & Co. Casements: Crittall Manufacturing Co. Sanitary fittings: Leeds Fireclay Co. Furniture: Hille of London Ltd. Sunblinds: Tidmarsh & Sons. Paint: Hadfields (Merton) Ltd. Cement Marketing Co. Photo mural: Carlton Artists Ltd.

House at Hertingfordbury, Herts. Architect: Geoffrey Woodward. General contractors: George Mott & Son.

Sub-contractors: Windows and external doors: Ware Joinery Works Ltd. **Internal doors and sink unit:** Jayanbee Joinery Ltd. **Sanitary fittings:** Stitsons Sanitary Fittings Ltd. **Fural aluminium roof (including all work above joists):** Whittaker & Co. (London). **Thermoplastic and wood block floors:** Hollis Bros. Ltd. **Heating and hot water:** E. Bentley & Co. **Ironmongery:** Nettlefold & Moser Ltd. **Electrical services:** Bland & Co. **Paints, internal:** Docker Brothers Ltd., **external:** I.C.I. (Paints Division) Ltd.

Flats at Liverpool, Liverpool City. Architect: Ronald Bradbury. Construction consulting engineer: W. V. Zinn. Quantity surveyors: Langdon and Every. General contractors: R. Costain & Sons (Liverpool). Sub-contractors: Aerials for radio and television: Antiference Installation Ltd. Plastering: A. R. Ball & Co. Central heating: Brightside Foundry & Engineering Co. Floor and wall tiling: Carter & Co. (London). Metal windows: Crittall Mfg. Co. Plumbing: Engineering Service Installations Ltd. Lift installation: The Express Lift Co. Lightning conductors: W. J. Furze & Co. Glazing: L. Keizer & Co. Floor tiles: The Marley Tile Co. Painting: F. & J. Pilling (Bros.). Asphalt: Ragusa Asphalt Paving Co. Booster set equipment: Rhodes, Brydeon & Youatt Ltd. Roofing: Vulcanite Ltd. Balustrades, etc.: E. Wilson & Co. (Collingwood). Electrical installations: Winstanley & Barnett.

School at Blechley, Bucks. County architect: F. B. Pooley. General contractors: Drabble Construction Ltd.

Sub-contractors: Pre-stressed Floors: Concrete Ltd. 'Trofdek' roof: H. Newsum, Sons & Co. Felt roofing: Permanite Ltd. Asphalt tanking: Faldo Asphalt Co. Wood block flooring: Hollis Bros. Ltd. Composition floor tiling: Marley Tile Co. Wooden windows: Webster & Cannon Ltd. Doors: J. G. Cherrington & Son. Tarmacadam: Chittenden & Simmons Ltd. Heating and hot water installation: Edward Deane & Beal Ltd. Electrical installation: Troughton & Young. Sanitary fittings: J. Bolding & Sons and Adamseiz Ltd. Terrazzo partitions: Mosaic & Terrazzo Precast Co. Ironmongery: J. Gibbons Ltd. Cloak-room fittings: Comyn Ching Co. Slate paving: Broughton Moor Green Slate Quarries. Tile panel: Carter & Co. (London). Concrete columns: Atlas Stone Co. Paint: International Paints Ltd.

Tea Bar in Lower Regent Street, S.W.1. Designers: Misha Black, William Apps and Kenneth Bays, Design Research Unit. General Contractors: F. W. Clifford Ltd. Patterned formica design: Thos. de la Rue & Co. Cane work: George Prior Ltd. Cork flooring: Resilient Tile & Flooring Co. Ventilation: Hope's Heating & Engineering, Ltd.

Mobile Demonstration Unit. Designers: Misha Black and William Apps, Design Research Unit. Contractors: Pilgrim Mobile Units Ltd. in collaboration with Berkeley Coachwork (Sales & Export) Ltd. Suppliers: Arne Jacobsen chairs: Woollands of Knightsbridge. Curtain material: Hilary Bourne and Barbara Allen. Upholstery material: Edinburgh Wea-

vers. Carpet: S. J. Stockwell & Co. Lighting Fittings: Forrest Modern, George Forrest & Son. Plastic finish to display units, cupboard fronts etc.: 'Formica' by Thomas De La Rue & Co.

Showroom in Old Street, E.C.1. Architect: F. M. Gross. Main contractor: Y. J. Lovell & Sons. Woodwork, false ceilings, floating ceilings: David Esdaile & Co. Heating Engineers: Ellis (Kensington) Ltd. External neon signs and internal panels in entrance: Courtney Pope (Electrical) Ltd. Electrical installation: London Electricity Board. Lamp fittings: General Electric Co.; Troughton & Young Ltd. Metal loading doors and canopy: Haskins Ltd. Settee, chairs, occasional tables: Finmar Ltd. Partition walls and metal furniture: Roneo Ltd. Plumbing: A. E. Cooper. Specially designed curtains: Marina Hoffer.

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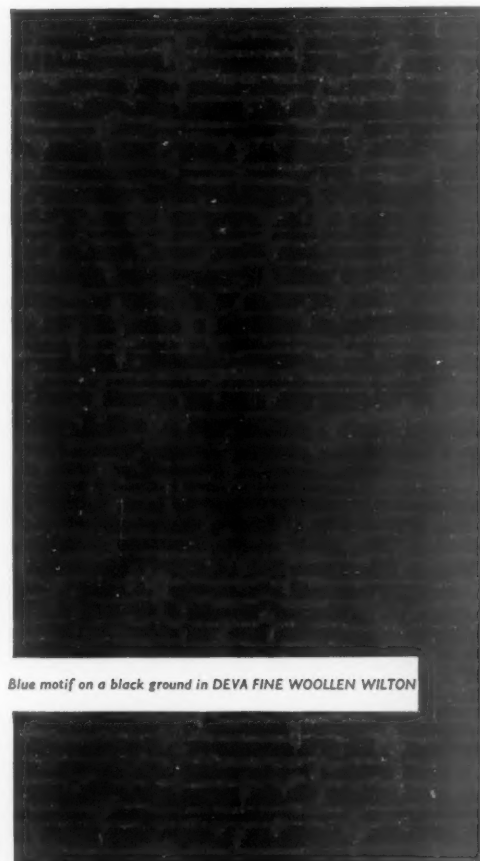
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